Issue 90 • 28 July 1990

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NEW COMPUTER EXPRESS

BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY

AMIGA

- AMOS Extras
- Welltris – well 'ard!
- Ethernet cards

ST

- RAM price cuts
- Cheap MIDI mixing
- Fire and Brimstone

PC

- Twin-screen PCs
- Extend A Name
- Windows 3 Prompt

CPC

- Join the French SAS
- Dick Tracy due

SPECTRUM

- More prime pokes!

Specialist Columns for: ARCHIMEDES•C64•MSX PCW•QL• SAM•BBC•PD

BARGAINS! 28 value-packed pages in **SHOPPING EXPRESS**

FROM CALAIS TO CANNES IN 10 SECONDS

Autoroute and Navigator race head-to-head through France page 52

POWER AMIGAS ANNOUNCED

Report pages 2 & 3

- High-end 3500 revealed
- Ultra-fast 25MHz 68040 card launched
- Top-secret Amiga 3000 portable planned

PLUS:

The best ever A500 bundle

THE BLACK ARTS OF THE DEMO DISK page 50

How the cracking crews push your machine to its limits

THE EXPRESS GUIDE TO FORE PLAY! page 56

The best and the rest of golf simulators on test

9 770957 064004 30

CONTENTS

FEATURES

STUDENT OF DEMOS 46
Are the cracking teams all bad, or do they have something to offer?

CONTINENTAL DRIFT 52
How your computer can help to plan your holidays

TEEING OFF 56
In the wake of the Open we ask which golf game is best

REGULARS

NEWS 2-6

COMMENT & ARCHIVE 7

TECH TIPS 49

SUBSCRIPTION OFFER 48

COMPETITION 48
£500-worth of Amiga software to be won

LETTERS 54

COMPUTER CHAOS 58

SHOPPING EXPRESS

BUYERS' GUIDE 19
Word processors

READER ADS 32

EXPRESS JOBS 36

EXPRESS SALES 38

PUBLIC DOMAIN 42

YOUR MACHINE

AMSTRAD CPC 9
SPECTRUM 10
SAM COUPE 10
AMSTRAD PCW 10
MSX 10
BBC MICRO 11
COMMODORE 64 11
SINCLAIR QL 11
ARCHIMEDES 11
ATARI ST 12
AMIGA 14
PC COMPATIBLES 16

Coupé couple set up to sell SAM upgrade

MGT bosses Alan Miles and Bruce Gordon have struck out on their own after receiver Touche Ross fired them from the firm they founded.

Their new firm, SAM Computers Ltd, is a company dedicated to supporting the SAM Coupé and all its registered owners, but the necessary ROM upgrades won't be free as MGT hd promised.

The administrative receiver has been unable to find a buyer for MGT and rather than see the Coupé fade into obscurity the former MGT bosses pledged to honour their obligations to the 8,000 owners who have returned their guarantee cards.

Alan Miles said: "We see this as a positive step to honour the guarantees given by MGT," but confirmed that ROM upgrades for existing owners would be in the region of £12. The new company, set up with Miles' and Gordon's own cash, aims to provide a source of ROM upgrades to existing users and a pivot point for people producing software and peripherals and the end user.

The company hopes to publish software titles as well as distributing existing software. During the period while a buyer is found for MGT, SAM Computers will help fill the void caused by its demise.

Miles outlined the new company's strategy. "We're getting together with software houses, repair companies and developers and forming Team SAM ," he said. "In the interim, SAM Computers will provide upgrade ROMs on an individual basis as required and offer technical support while offering a grass-roots environment with service that amounts to more than just box shifting." The latest version of the DOS and the Spectrum emulator will be included in the ROM upgrade package.

SAM Computers Limited will make its public debut at the All Formats Computer Fair at the Horticultural Halls, Victoria on August 4 and 5. At the show it will share an exhibition area with Enigma Variations which has pledged its support to the new venture.

Enigma was the first software house to write SAM-specific software which took advantage of the machine's sound and graphic abilities and its *Defenders of the Earth* has been likened to the 16-bit versions.

Entrepreneur Bruce Everiss is continuing his support for the machine with a SAM Coupé 0898 telephone hotline and distributor Hollington Myers will continue to distribute the product.

Miles is confident that his 'Team SAM' can deliver the goods and said: "We believe in the Coupé and so do all its buyers. We hope that people will see that we are acting in the best interests of all our customers."

Tom Cruise and Turtlemania

AMIGA MOVIE XMAS BUNDLE

Details are emerging of the new Amiga bargain bundle for Christmas 1990, which features five brand-new titles of which four are blockbuster Christmas movie tie-ins.

Prime suspects for the line up are the omnipresent *Teenage Mutant Hero Turtles*, by Mirrorsoft, and the Mindscape game based on the new Tom Cruise film, *Days Of Thunder*.

The *Turtles* game is a beat-'em-up based on the famous Mutant Turtle coin-op machine, and *Days* is a 3D road racing game somewhat like *Stunt Car Racer* in style.

The marketing of the £399 pack is apparently going to be even more aggressive than the scheme which pushed the Batpack sales through the roof last yuletide. The bundle will be launched like all this year's Christmas products at the Computer Entertainment Show on September 13.

• *The new bundle will aim to emulate the success of Flight of Fantasy and Batman.*

• *Cyberspaced-out: Californian show coming.*

Cyberspace on show

The world's first cyberspace show will be held in San Francisco on August 10. The *From Psychodelics to Cyberspace* show will be hosted, somewhat inappropriately, by '60s acid guru Timothy Leary, and will feature leading virtual reality companies such as VPL, Sense 8 and Autodesk.

Participants from the audience will be treated to trips through virtual space wearing eyephones and datasuits. The only British company likely to make an appearance is V51, which describes itself as 'a virtual multimedia onslaught'.

Watch this virtual space for more details.

Seeing double

Datapath has released two dual screen driver cards to allow you to run *AutoCAD* using two monitors at once, as the fellow on the left is demonstrating.

By adding the QPC or QMCA card to a system already running VGA, you can run the program with two monitors at once, with the VGA card providing an overview and the Datapath cards providing the high resolution detail on another screen.

A few modifications have been made to the *AutoCAD* program itself, making the menu buttons look 3D and pop in when pushed. The normal rendering of each view has been buffered so there is no waiting for redraws giving what Datapath calls 'less distraction from the thought processes'.

Call Datapath on 0332 294441.

Space show aids chip design

On Tuesday July 17 a satellite was launched into orbit from Cape Canaveral on a joint Anglo-German mission to test the effects of radiation on astral microchips.

The device, called Combined Release and Radiation Effects Satellite (CRRES), will light up the invisible lines which make up the radioactive Van Allen belt allowing the scientists at University College London to map them.

The satellite will create 'the biggest fireworks display in history' around January next year, while giving designers of space-borne computers and other hardware vital clues to designing cheaper chips.

It is suspected that the strength of the Van Allen belts has been overestimated. If the information gained on this mission shows radiation cladding can be reduced on these devices, then it will cost substantially less to put these items into space. ■

• Blow up a PC screen to the size of a wall with the Magnavision overhead projector.

Big screen

A full-colour LCD computer projection panel which can be used to enhance your PC presentations is now on sale.

The Telex Magnabyte 6000 is capable of displaying 2,197 colours and is compatible with most PCs. You can also use the Magnabyte and your own PC screen at the same time.

The price is £4,575. For more information call 071-387 3399. ■

Super disk

Japanese scientists have developed a new optical disk material which it is said can store 250K of data on disk in just 0.0006 seconds.

Developed by the Nippon Telegraph and Telephone Corporation, the new media is capable of storing up to 1,000 times more information than a conventional Compact Disc on a disk 12cm in diameter. ■

• 68040 upgrade • 3500 tower • 3000 portable

TOP-END AMIGAS GO ON THE WARPATH

After *Express*'s revelations of a new 32MHz TT last week, Atari devotees have been dealt a severe blow with the announcement of three new products which push Amiga 3000 technology into the lead once more.

A superfast 68040 accelerator card, a new Amiga 3500 tower system and a secret 3000 portable are all waiting in the wings.

The Supra 68040 accelerator card, previewed at the AmiExpo in Chicago this month, slots into the 200-pin processor slot of an Amiga 3000 equipping it with the faster processing 25MHz 68040. The new Motorola chip features an on-board memory management unit (MMU) and maths co-processor, making it up to 10 times faster than the chip in the plain vanilla 3000.

"It accelerates operations like ray tracing, rendering or even spreadsheet recalculation," Supra's spokesman Joern Hey told *Express*, "and it does these things by a factor of about 10 times faster than a 25MHz Amiga 3000. And if you compare it to the 2000, it's a factor of about 100 times."

Supra sees a big market for the device in fields like graphics, CAD, DTP, but more importantly markets which don't yet exist like real time digitising or video sampling. Supra is the first company in the world to take advantage of the processor slot in the 3000, even ahead of Commodore itself.

The real snag with '040 chips and the Amiga is that the Amiga OS component called Exec, which normally deals with memory management itself, wants to ignore any external MMUs if not told to do otherwise. This means a radical rewrite to the system software if an '040 chip is to be used, but Supra has clearly overcome this. The cards should be shipping in the US in the autumn and the UK some time around spring/summer 1991, with prices estimated to be in the region of $1,500.

• The Amiga 3000: upgrades on the way.

Also confirmed through a number of sources in the US and UK this week is the Amiga 3500 tower system.

The 3500 is an Amiga 3000 in a new businesslike tower-style case sporting more space for the Zorro III format expansion cards which allow users to add on hard disks, emulators, monitors and modems. The official line from Commodore is that the new unit is scheduled for release towards the end of this year and is geared towards corporate CAD/CAM. While the 3000 still awaits its planned Unix operating system the 3500 is seen as a means of further consolidating the machine as a serious platform.

Details of the spec of the machine originally emerged from the schematic diagrams at the back of the 3000 manual which state that more slots will be available in the 3500. No price details are available, but as the units contain 3000 motherboards they should be in line with 3000 prices.

But perhaps most exciting of all the recent developments are the claims of sources close to Commodore that the company has just started work on a portable version of the 3000 with a projected price-point of around £5,000.

The exact specifications are still sketchy, but 4Mb of RAM, a built in high-resolution monitor with external connections to colour multisync monitors, a single 3.5-inch drive and 40Mb hard disk are known to be under firm consideration.

Commodore has declined to comment on the 3000 portable, but this is no big surprise given its penchant for absolute secrecy until a product is officially launched.

Clearly the 3000 is Commodore's flagship computer for the Nineties, and is going to be exploited in as many different forms as possible in the coming 12 months. ■

PARDON, I DIDN'T SEE WHAT YOU WERE SAYING...

A computer is being developed which will be able to lip read. Until now computers have been programmed to recognise letters and numbers. This new development, which is being worked on by Alan Goldshen, a hearing-impaired student from George Washington University in Washington DC, aims at extending this to words and even sentences.

The computer is 'trained' by making it analyse digitised pictures of a speaking human mouth. From this it develops a lexicon of phonemes – a set of speech sounds which differentiate one word from another.

The project is having the same difficulties as anyone who has to learn to lip read, for example it struggles over the difference between 'bet' and 'pet'. ■

Lotus 1-2-3 opens Windows

Lotus Development is to release a new version of its very popular Lotus *1-2-3* spreadsheet package which is compatible with the new-look Windows 3.0 WIMP interface for PC compatibles.

The new version is to be called Lotus *1-2-3-4 Windows*. The product is in development right now, but as yet no firm release date has been announced.

The Windows version of *1-2-3* will be in direct competition with the already well-established WIMP spreadsheet Microsoft *Excel*. The war between the spreadsheet manufacturers, which has lead to superb upgrade deals for end users from rival firms, looks set to accelarate still more. ■

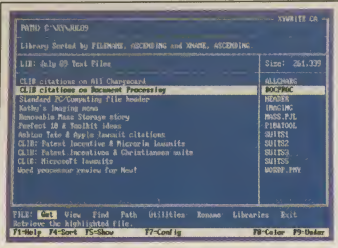
450 books on one disk

Californian scientists working for World Library have put unabridged versions of 450 books on a single CD-ROM.

The first edition of World Library's *Library Of The Future* series features works of classical Greek literature, plus works of European authors including Chaucer, Shakespeare, Edgar Allen Poe, Arthur Conan-Doyle and Walt Whitman and a range of historical documents including the Magna Carta.

The disk features software called *Automated Archives* which lets you search the entire disk for a certain phrase, and comes priced at just $695 for the PC version. A Mac version is expected in the near future.

Further details and full lists of the books on the disk are available from World Library on 010-1-714-748-7197. ■



• *Give files proper names with XNP.*

Nowucan nmfls clrly

MS-DOS programs can now have longer, more meaningful file names, thanks to *Extend-a-Name Plus*, or *XNP*, by the World Software Corp.

This means that instead of calling a file something cryptic like 'FNDSOUT1.WK1' you can call it "Funds Out File One 15/4/90" and use up to 60 characters.

The secret of *XNP* is that it works in the background of any program you use. When your application looks for files on your disk, *XNP* intercepts with its own pop-up menu and allows you to retrieve the file using its extended name. It has been tested with many popular programs like *WordPerfect*, Lotus *1-2-3*, *Word*, *AutoCAD*, and others.

The program only uses about 4.5K of memory, if you have any expanded memory on board, otherwise it takes 42K. *XNP* costs $89 for single user and $249 for a five user network version in the States, no UK distribution has yet been fixed. For more information call 010-1-800-962-6360.

Smaller chips from new kind of diamond

A breakthrough in diamond manufacture could reduce the size of chips still further.

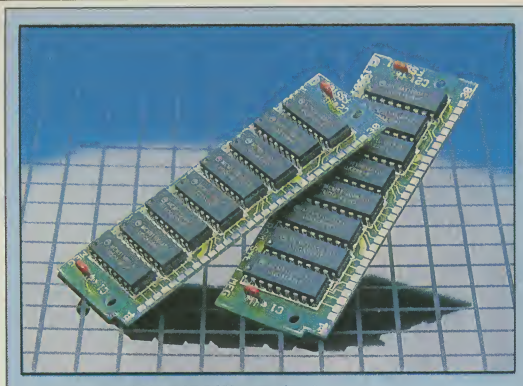
Man-made diamonds have been developed which are 50 per cent more heat conductive than their natural counterparts. Not only this, but they are also less inclined to damage from laser beams.

What this means to the computer user is that microchips can be packed even tighter with less chance of heat damage. Smaller chips mean more power can be packed into the desktop computer.

The new diamond has been developed by General Electric in the United States. Man-made diamonds can now be made in large sizes, worrying jewellers who fear a price drop.

Father of the chip dies

The inventor of the integrated circuit, Robert Noyce, is dead. He died suddenly earlier this month. Without Dr Noyce and his team at Intel the desktop computer would still be a dream machine.



• *Frontier's solderless ST RAM upgrade.*

PRICE DROP FOR ST RAM UPGRADES

Frontier Software has announced price cuts for its range of Xtra-RAM ST add-in memory boards.

The boards, which just clip on to the motherboard without soldering, come in two configurations for the ST and STE. The price drops are as follows: The empty board has dropped from £69.99 to £64.99, with 512K and 2Mb ST versions dropping to £79.99 and £189.99. The STE versions dive to £69.99 and £169.99 respectively.

The price drops are directly related to the recent fall in the cost of DRAMs, a saving which Frontier is keen to pass on to its customers. For more information about the Xtra-RAM cards, call Frontier Software on (0423) 567140.

Personal Intelligent Communicator planned in US

APPLE STARTS WORK ON MAGIC MACHINE

Apple is to help fund the development of a new computer called the Personal Intelligent Communicator, which will be put together by a new firm, General Magic.

The project is primarily designed to produce computers with intuitive interfaces, and to that end the new company is off to a good start, having been founded and partly funded by none other than *MacPaint* and *Hypercard* author Bill Atkinson, and the Mac operating system designer Andy Hertzfeld.

Although the first computer from GM is said to be 'two years away', *Express* has learnt of another General Magic device scheduled for launch in the spring.

The MacSlate is a smart keyboard with LCD screen which can be used away from the host machine. Basically a Mac portable minus the GUI desktop and other niceties like a disk drive, but able to accept and edit data for later downloading to a Mac, the MacSlate is as yet unpriced.

• *Mac Plus: educational establishments can save a pretty penny.*

Meanwhile Apple Computer has paid $1 million to use the name 'Classic' on its new low-end Mac (*Express* 81). The rights to the name were previously owned by Modular Computer Systems of Fort Lauderdale, Florida, but it has sold the name to Apple.

The Mac Classic will replace the Plus and SE as the cheap way into Mac technology, and will sport 1Mb of RAM and a 1.6Mb drive, plus all the same port connections as an SE.

The price is expected to come out at around $1,500, although Apple has yet to confirm the price point for the new machine.

• Apple Computer UK has announced large cuts in the price of Macs to educational establishments.

The prices affect only the Mac Plus computers and mean that the price of the basic Mac Plus plummets from £695 to around £475. For application details and specific prices call Apple Computer on 081-872-3028.

Prompt service

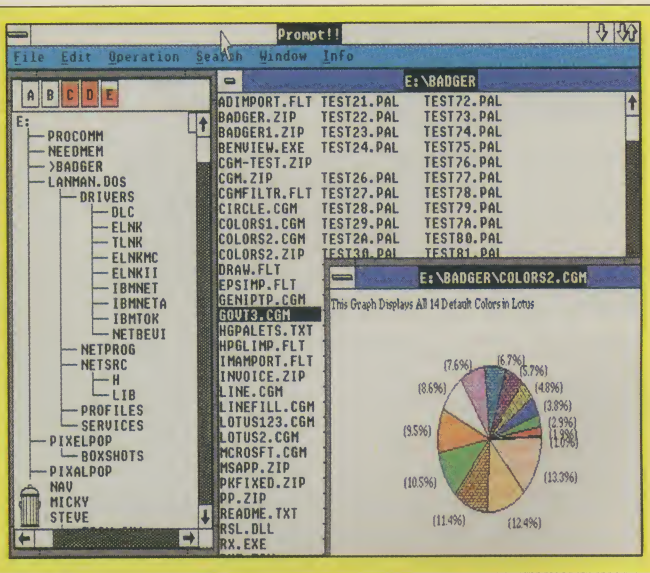
Despite only being available for a few weeks, Windows 3 is already attracting utility programs. The latest of these is the hard disk file handling system *Prompt* (pictured right).

The software offers the facility to view the contents of files in such varied formats as *WordPerfect*, Microsoft *Word*, *Excel* and *1-2-3*, among others.

File handling functions like copy, delete and create are handled by mouse click and drag. Directories can also be dragged from one place to another.

You can encrypt and compress files, and see bar charts of available space. It will also work with the Windows-compatible text retrieval system *Dragnet*.

The price is approximately £130 ($129.95) unfortunately it is only available in the United States at the moment. For more information you should call Access Softek on 010-415 6540190.



Unofficial national personal listing on the cards, warns Registrar

ALL PERSONAL INFO MAY BE HELD IN ONE BIG DATABASE

Databases could be used to cross reference data held on each and every one of us to form an unofficial national database, according to the annual report from the Data Protection Registrar (DPR), released last week.

Areas of concern mentioned in the report included the creation of an unofficial national identity system using out of context 'data matching', understaffing of the DPR itself, problems with the Community Charge and credit agencies, and the lack of any international standards for data protection.

The report claims that national insurance numbers can be used as a '*de facto* common identifier' which will 'creep into existence' on a national basis.

The main worry is that such a common identifier could be used to cross-reference or 'data match' files on an individual without that individual's knowledge. In this way databases from different sources could be combined together, producing a comprehensive database on a person without that person knowing anything about it.

This data matching could combine data which is totally out of context, producing a misleading file, and could also replicate mistakes made on computer files, which would be difficult to correct since the person using it might have no working knowledge of the possible mistakes arising from a specific area.

Other countries already have legislation to control this kind of activity, including the US, Canada and Australia.

Concern is also mounting about data on third parties being accessed as part of an otherwise legitimate request. The DPR has already informed four of the main credit assesment agencies that it is considering taking action over the supply of information on individuals not directly connected to the loan information they are processing.

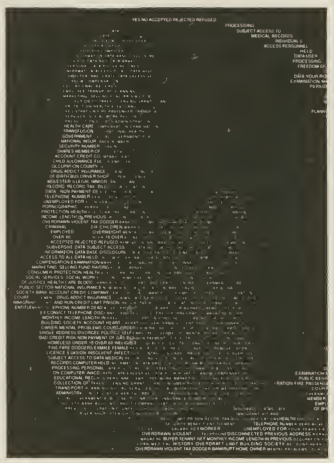
The collection of information for the Community Charge or poll tax is another major issue. Complaints about the facts requested on poll tax forms have come into the DPR thick and fast, so much so that 14 councils have been refused registration and a further nine have been issued with formal enforcement notices.

The lack of any international standard for data protection is also a problem. A direct (junk) mail company may well get hold of personal details and conduct the direct mail operation from abroad, avoiding the restrictions of the act. Mail shots from the United States are a growing phenomenon, as are those from Europe.

Although the 1989 International Meeting of Data Commissioners called for "equivalent protection in trading nations" nothing has yet been ratified.

A problem for the Data Protection Agency in policing computer-held data is understaffing in the agency itself. The DPR currently has 60 full-time staff, complemented by another 41 part-timers.

After only three paragraphs of the report, the Registrar, Eric Howe made the following statement: "I have to say that pressures on staff time have made responses by no means perfect. I hope that new staff now being recruited will enable me to give faster responses from late this year onwards."



• Eric Howe, the Data Protection Registrar, and one of the registry's leaflets explaining your rights.

They've got your number...

How many databases could you be on? It's probably more than you think. Here are just 40 possible record numbers for an average individual who left school at the age of 18.

1. A-level certificate numbers
2. Autobank PIN number
3. Bank account
4. Bank black lists
5. College or sixth form numbers
6. Community charge number
7. Credit assessment lists
8. Credit card numbers
9. Charge card numbers
10. Date of birth
11. Dentist reference
12. Driving licence number
13. Electoral register
14. Employee number
15. GCSE certificate numbers
16. GP's reference
17. Hardware registration numbers
18. Insurance policy numbers
19. Library card number
20. Magazine, journal, newspaper subscription numbers
21. National Health number
22. National Insurance number
23. Parking ticket numbers
24. Passport number
25. PAYE number
26. Pension numbers
27. Post Office savings account
28. Premium Bond numbers
29. Product guarantee numbers
30. School records
31. Software registration numbers
32. Store card numbers
33. Telephone numbers
34. Train/bus season ticket number
35. TV (Cable) registration numbers
36. TV (Satellite) registration numbers
37. TV licence
38. Union/Association number
39. Various club membership numbers
40. Vet's reference

COURT CASES

1989 saw 30 prosecutions brought, 23 of which have been concluded. The bulk of these were heard by Magistrates' Courts, but one, thought to concern a major High Street building society, is to be heard in a Crown Court. 22 of the 23 cases brought produced guilty verdicts. Prosecutions involved company directors, security companies, a golf club and mailing organisations among others.

Big database is watching you...

One of the most insidious and irritating uses for computer-held personal information is direct marketing, or junk mail.

Junk mailing has grown from a hit-and-miss affair making up only two or three per cent of large marketing strategies to an industry which accounts for nearly a quarter of many companies' marketing budgets.

Companies get their information from sources such as the Electoral Register (the Representation of the People Amendment Regulations 1990 mean that electoral registration officers have to supply copies of the register to anyone on demand). In fact list after list of personal information is passed on, or more commonly sold, to companies wishing to carry out junk mail campaigns.

One main source for the marketeers is the new National Consumer Database (NCD). This holds up to 300 'facts' on 43 million people in this country alone. It holds investment details on 8 million people complete with postcodes.

THE DATA PROTECTION REGISTRAR

The National Consumer Database is sold to marketing professionals with the following clarion call: "43 million people. 22 million households. 80 billion bits of information."

This information does not simply relate to name and address, the NCD boasts: "Information is gathered on people, homes, wealth, location and lifestyle. The NCD holds accurate information on individuals, their income and equity investments. All available private telephone numbers are also being added ... lifestyle information combined with other sources enables us to build psychographic clusters ..."

Japan buys top UK firm

Japanese computer and electronics firm Fujitsu is to buy a majority shareholding in the British firm ICL, which is Europe's most profitable high-technology company.

This move will compromise several joint European projects, including Esprit and Eureka, with which ICL was involved. These projects were aimed directly at combatting Japanese technological supremacy.

The projects are Europe-led but they also include the participation of American companies such as IBM. The threat of a major European company coming into Japanese hands may force a rethink in American strategies and consequently affect funding and the ability of the consortium to sell into the US market.

This move follows the trend set by Mitsubishi which bought Apricot, the one-time personal computer manufacturer.

While ICL is better known for its mainframe computer production, it is in a good position to provide a base for Fujitsu's disk drive and printer production this country.

ICL is valued at around £1.5 billion. The final agreement should be signed on July 30.

Your chance to ask god

***Ask God* is a $129 text searcher combining hypertext and artificial intelligence routines which can find any word among up to four gigabytes of ASCII text in just two disk seeks.**

Running on a standard PC, but demanding 4.5 Mb of hard disk space, *Ask God* comes, of course, with a digital Bible. The software's publisher, Business Solutions on 0800 648 6258, plans to make versions availble for legal, medical and accounting purposes.

Friday 13th damp squib

Yet again Friday 13th passed with a whimper rather than the media-boosted bang.

The annual spate of virus fear was followed by the equally regular anticlimax. People had either protected their computers with disinfectant programs, had changed the dates or had simply not bothered switching their machines on. The Saturday 14th virus which was also supposed to wreak havoc declined to make an appearance.

Two unlucky organisations did suffer, but more from embarrassment than any great damage; Tokyo's Waseda University reported that 100 of its computers were infected – no damage – and Fujitsu, the Japanese electronics mega-corp, managed to cure 20 of its machines after a virus was detected.

Up to £150 slashed • Lotus 1-2-3 bundled in

AMSTRAD TO CUT PC PRICES IN AUTUMN

Amstrad is to cut the price of the PC1640 and the PC2086, and it will also be putting together new software bundles.

In the face of mounting attacks on the budget PC market from companies such as Commodore with its Starter Pack, Olivetti with its PCS range, Philips with its PCD range and even IBM with its new PS/1 computer, Amstrad has gone for software bundling, price cutting and a £1.5 million advertising campaign.

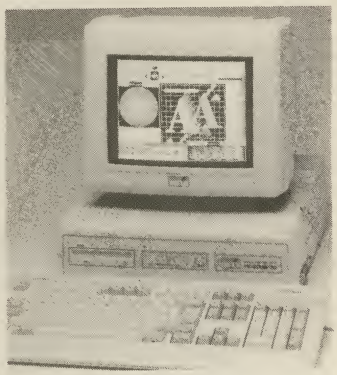
The PC2086 range will, from September, be bundled with Lotus *1-2-3* version 2.01 which is valued at £395. On top of this, the hard disk based 2086 models will be cut in price by £50.

The long-expected pairing of the 1640 with Locomotive's *LocoScript PC* (valued at £125) will also come about in September. The single drive, mono monitor 1640 will be cut in price by £100 which means that it will sell for £449, less than the price of a PCW9512. The 1640 with hard drive and mono monitor will have £150 cut from its price and will consequently retail for £699.

Amstrad's UK managing director Barry Young claims that the moves are "aimed once again to stimulate the market by offering a simplified and competitively-priced solution."

The market will be further stimulated by a £1.5 million advertising campaign in order to push the new packages.

Both the cuts and the new packages will be available in early September. The offers will last until December 31.



• PC2086: price cut and spreadsheet bundle in September.

Home & office software for the Archimedes

Minerva Software has announced two new 'home office' programs for the Archimedes A3000, called *PC Access* and *DeskTop Office*.

DeskTop Office is a suite of integrated productivity programs. The multitasking program comprises of a word processor, spreadsheet, graph and chart program, and communications package. The programs can all share data between them using specially written import/export routines. *DTO* is priced at £129.95, or £99.95 for educational establishments.

PC Access on the other hand, gives you access to and from data on MS-DOS or Atari ST disks, letting you turn one of your Archie drives into a PC drive while you copy data across. *PC Access* costs £39.95.

The firm also announced an enhanced multitasking version of the *Graphbox* graphs and charting program which now has a 'hot link' to *Pipedream* 3, meaning that as data is recalculated by *Pipedream*, the graphs in *Graphbox* change to match. Existing users can upgrade to the new version for £11.50.

For full details on these products call Minerva Software on 0392 437756.

• The Commodore 64: about to get a great new magazine.

New mag for the C64

Future Publishing, publisher of *Amiga Format*, *ST Format* and *New Computer Express*, is to launch a new magazine for the Commodore 64 in September.

The new title, called *Commodore Format*, will be tailored to the needs of the owners of the world's best-selling home computer, and will feature a fun-packed magazine plus cover-mounted cassette every month.

***Commodore Format* joins an already well established stable of popular computing magazines, and is all set to ride the crest of Commodore's enormous Christmas marketing push. With the already well-established software and hardware base going back some eight years, the 64 market is looking to a rosy future with the impending release of the cartridge-compatible Commodore Cub game console.**

Launch date for the first issue of *Commodore Format* is slated for September 13, priced at £1.95.

COMMENT

General Magic's plans for the future of personal computing may be under wraps, but its association with Apple will guarantee surprises....

A couple of months back, Apple's Chief Executive, John Sculley, defended his company's relatively high pricing policy with reference to the large proportion of monies invested in research and development.

His argument ran something along the lines of 'cutting prices would mean cutting jobs, cutting jobs would mean cutting the cutting edge'. At the risk of playing too heavily with words, this was the man who actually did cut jobs. Steve Jobs – the company's co-founder and all-round Silicon Valley whizz kid who took Apple from Bill Wozniak's garage to the multi-national horizons of America's most successful personal computer corporation. While the NeXT machine may not have taken off with quite the same impact as his Apple II, it again demonstrated something of the vision emanating from the Apple corral.

Apple has always been innovative, indeed it's built its reputation on originality. Central to this has been its drive towards the ultimate in user-friendliness typified by the front-end it pioneered with more than a little help from Xerox. The recent massive take-up of Windows 3 is proof that both power user and punter prefer to relax while computing. Proof too that profits will be tighter for Apple in the future now that the once hostile PC is, arguably, as friendly as a Mac.

So, within the space of a few short weeks we have a couple of announcements from Apple which show its resolve to take the competition onto a new battleground. First of all, the decision to launch the low-end Mac, which we now know to be the Apple Classic. A sub-£1,000 modular machine intended to replace the Plus and SE, compete professionally with the likes of the Atari ST and Commodore Amiga, and corporately with the Amstrads and, after the PS/1, the IBMs of this world. The race is indeed on for power without the price. And it will be won at any cost.

But Apple has another ace up its sleeve. And it's one it can draw on from a long association with another of California's wunderkind. Bill Atkinson brought Mac owners the all-singing, all-dancing *HyperCard* – the program that still refuses to be pigeon-holed. Ask anyone who's ever used used *HyperCard* to describe what it is and you'll be met with a "well it's kinda like er...everything...er" reply. Thought processor, multimedia database, personal organiser, etc etc. So now that clones have arisen on the ST, Amiga and PC and a new version supporting colour is set for launch, Atkinson takes time out and decides to conjure up some General Magic.

Apple holding on to the exclusive marketing rights to the new company's Personal Intelligent Communicator may signify that it is, after all, preparing to divest itself of some R&D costs. General Magic's first release, one of those 'if it was that simple why didn't I think of it' devices, is a smart keyboard with RAM and LCD you can take away to work on and just plug in and continue when you return to its host machine. The MacSlate is indeed a neat idea. Doubtless a very profitable neat idea undercutting just about every portable this side of a Z88.

But the PIC could well be neater. Although there are virtually no hard facts to go on, we can at least surmise what tricks General Magic may have up its sleeve. The *Express* bet? Oh, something like a hand-held colour LCD with built-in fax, videophone and on-line applications packages for under $1,000. No? Well let's just wait and see eh? ■

FROM the ARCHIVE

ONE YEAR AGO

Amstrad decided to replace all the hard disk drives in its 286 and 386 machines after months of complaints and speculation about performance and reliability.

A hard disk hotline was set up and owners were encouraged to call and organise the replacement of the errant drives. Amstrad organised the maintenance contract with Dictaphone, whose engineers replaced the Western Digital hard disk and controller unit and transferred the data to the new disk.

Cult puppeteer Gerry Anderson launched the computer game version of *Thunderbirds*. Virgin Record's Megastore in Oxford Street was crammed with legions of fans of *Thunderbirds* for the launch.

Computer games joined the list of desirable loads for lorry hijackers when a French gang cracked a lorry near Paris and made off with boxes of software.

The thieves chose Psygnosis's *Blood Money* in preference to thousands of pounds worth of cigarette lighters and clocks that were also in the lorry.

Ten months ahead of the dreaded change from 01 to 071 and 081 numbers for London phone subscribers, Qualsoft brought out *London STD*, a program designed to automatically change the numbers in telephone databases.

At only £10 it was gobbled up and went some way to smooth the transition this May.

W H Smith took the US Gold game *Skweek* off the shelves after several copies were found to contain foul language

The cute character in *Skweek* communicated via speech bubbles. On some screens these were found to contain four-letter expletives.

The bogus copies of the game were blamed on 'crackers' who had interfered with the code of the game and somehow introduced copies to the shelves.

A member of W H Smith staff found the rude *Skweek* during a routine check of software.

A Post Office study showed that less than four per cent of university students saw computing as an ideal career.

Of the 1,000 students surveyed, only 17 per cent were even prepared to consider a career in the computer industry.

Suffering from the backwash caused by its high end PC hard disk troubles, Amstrad slashed the prices of its 286 and 386 machines by up to £700.

The new retail price list cut £50 off the twin drive colour 286 bringing it down to £1,099. At the top end, the 386 PCs had their prices lopped by £650 (mono) and £700 (colour) bringing the top of the range 65 Mb VGA model down to a more affordable £2,299.

TWO YEARS AGO

Amstrad climbed in bed with IBM in a cross licencing patents deal which gave both companies access to each other's products... at a price.

The deal was reported as a pay-as-you-go arrangement where Amstrad and IBM would pay as and when they used each other's patents and licences.

A US report by Dataprog Inc predicted that by 1995 computer crime in the US would be more common than conventional crime and that a whole generation of police would have to know the inside of a computer as well as they knew their traditional beat.

Sources: *New Computer Express, Computer Trade Weekly, Computer Talk.*

COMPUTER EXPRESS

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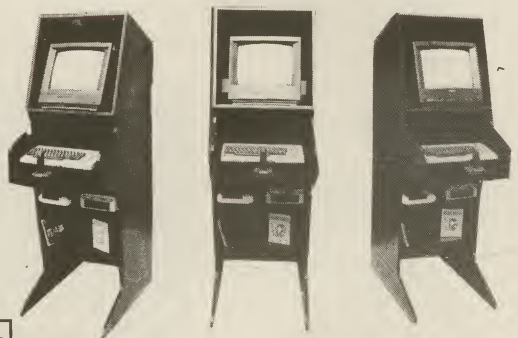

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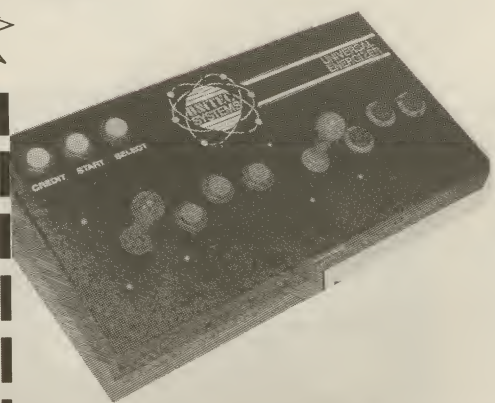
£179!



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Address _____

_____

Send your order to: Cyber-Tech Distributions, Interstate House, 40 Long Street, Dursley, Glos. GL11 4JB
Please allow 28 days for delivery

CPC

MORE FROM TITUS

French software house Titus really has been busy. It's now signed a deal with the American Disney company to produce games under the brand-new Disney label. And the first release under this new label is a real biggie – *Dick Tracy*, no less.

The game will feature scenes and action from the movie of the same name, which itself promises to be a blockbuster, boasting as it does such stars as Madonna and Warren Beatty. (Mind you, it's still kind of difficult to get used to the idea of Madonna being in a Disney movie...)

Also coming up from Titus are a range of educational programs, featuring Disney characters like Goofy, Mickey Mouse, Donald Duck and others. Further details are yet to emerge, but the educational packages are due to arrive in September.

Meanwhile, Titus has come up with a new concept in games design. It's called the Action Concept, and works on the principle of supplementing a special 'system disk' containing the bare game code with 'data disks', each of which has an entirely different scenario, set of characters and gameplay.

All the games in the series will feature full-screen isometric 3D graphics, and include characters with their own personalities. The first game using the new system will be called *Commando War*. It's a one- or two-player tactical, jungle-based combat game: I'll let you know my verdict as soon as I can get my hands on a copy.

PLAYING GOD

I've a letter here from Adam Roper, of Gillingham, who says:

"My friend recently bought an Amiga and then purchased a game called *Populous*. The object of the game is to make land for your people to settle on while also trying to stop your enemy's population from growing by causing floods, earthquakes and so on. This is one of the best games I have played, and I was wondering if any 'God' simulation games like this have come out on the Amstrad. If so, where can these games be purchased and how much are they?"

Well, Adam, to the best of my knowledge there are no plans to release *Populous* on the CPC. However, you might be interested in *Sim City*, from Infogrames. In this game, you act as mayor of a rapidly-developing city, deciding where and when to allocate your financial resources. Do you build more houses or more industry? Do you give the population the sports stadium they demand, or do you build that extra power station to cut down on blackouts? On top of this, you have natural disasters to cope with too – air crashes, earthquakes, floods...

Sim City will be available on the CPC soon. Look out for it.

FANZINE NEWS

Thomas Defoe, of Bishop's Stortford, wants a plug for his fanzine, *Print-Out*.

"The magazine is aimed at the serious user," he says, "and each issue includes over 40 A4 pages with at least 20,000 words per issue. Over half the magazine is given over to tutorials and programs. The rest of the pages contain serious and homebrew reviews, news and comments, helplines, special features and question and answer pages, as well as the occasional competition.

"We would be very grateful if you could print a mention about *Print-Out* in your magazine so that more people could learn of our existence."

Well, skimming through *Print-Out*, I have to say that I'm impressed. A lot of thought and effort has gone into the design and layout of the pages, with numerous pictures and artwork used to break up the text and add interest. Considering it's done entirely on a CPC with a dot-matrix printer, a very creditable effort indeed. As Thomas explains, *Print-Out* is for people who want to do more with their CPC than simply play games, and the articles, tutorials and type-ins should keep any reader busy for days. Thomas stresses than all reader queries, whether they're printed in the mag or not, are answered personally. He also goes on to say that if you're interested in contributing, *Print-Out* offers opportunities for potential writers and artists!

The mag comes out approximately once every two months, though precise dates can't be given. One issue costs £1.10, but various subscription rates are on offer.

If you want to find out more about *Print-Out*, or even order a copy (cheques should be made payable to Thomas Defoe), write to *Print-Out*, 8 Maze Green Road, Bishop's Stortford, Hertfordshire CM23 2PJ.

Rod Lawton

HOSTAGES HITS THE CPC

OK, call it in questionable taste if you like, but Infogrames' *Hostages* is actually a pretty good game. It's been out on the 16-bits for quite a while, and the 8-bit version has been well worth the wait.

The plot owes more than a little to those celebrated SAS exploits a few years ago, with trained servicemen swinging through embassy windows throwing caution and stun grenades to the wind. Only the names have been changed – your six-man squad is now called a Direct Intervention Combat Team.

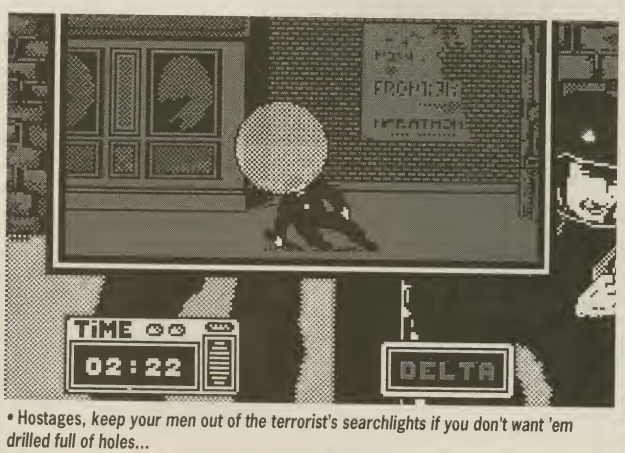
The game comes in three distinct sections. Firstly, three of your men must deploy to special positions around the embassy to act as snipers, but to do this they must run the gauntlet of the enemy's guns. The bad guys continually sweep the streets with spotlights, and at the same time as avoiding these you must keep calling up the map which tells you the spots your men must get to. If one of them gets caught by a spotlight, there's only your reflexes and his acrobatic forward rolls between him and a hail of bullets.

Get your men into position and you start the second stage of the game. Here, your men are sitting at windows, watching those of the embassy for the tell-tale silhouettes of the terrorists. As soon as a shadow appears at the curtains you must aim and fire – this section is timed, so don't take too long.

The third stage, and the best in the game, arrives when the other three men in your squad land on the embassy roof. One at a time they have to abseil down to a window and then burst in. The view changes to a 3D simulation of the embassy's rooms and corridors, and there now follows a rather nasty game of hide-and-seek, where your men must advance through the building with weapons cocked. You have a map to show you the layout of the floor and where everyone else is, but apart from that you play the game from the viewpoint of each DICT man. Just because you can't see them, it doesn't mean they can't see you... (Look behind you!)

Your aim? On the lower levels you simply have to wipe out all the bad guys. On the higher levels you've got to save all the hostages too – and those terrorists are not averse to using them as human shields.

International terrorism might be a rather dubious thing to make a game out of, but Infogrames' *Hostages* is a well-planned and well put-together game. The graphics are good all the way through, and the suspense builds up progressively as you advance through the game. The first two sections are a bit thin on the gameplay front, but the third makes up for it. Not bad at all. Price is £9.99 on cassette, £14.99 on disk.



• Hostages, *keep your men out of the terrorist's searchlights if you don't want 'em drilled full of holes...*

YOUR FORMAT

MACHINE SPECIFIC COLUMN

CPC 9

Spectrum 10

SAM Coupé 10

PCW 10

MSX 10

QL 11

BBC 11

Archimedes 11

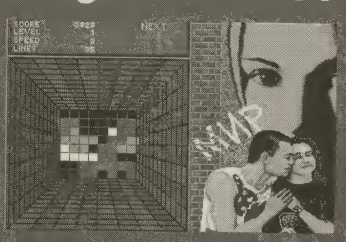
C64 11

ST 12

• *Sniping at the terrorists as they appear in the embassy windows in* Hostage.

• Fire and Brimstone: *seriously addictive.*

Amiga 14



• Tetris *with a difference, in the form of* Welltris *from Infogrames.*

PC 16

SPECTRUM

REVOLUTIONARY STUFF

Raf Cecco sounds more like a Cuban revolutionary freedom fighter than a Speccy programmer (who are usually called Shaun or Kevin or something) but he's a household name among Spectrum owners thanks to an excellent softography of classic games. Now his four best to date have been collected in one package, available from Hewson. *Cecco's Collection* comprises *Exolon*, a colourful walking-along-shooting-aliens type game with lots of strategic thinking as well as blasting needed; *Cybernoid*, a reconstruction of the traditional shoot-em-up with lots of colour and a similar line in strategic thinking to *Exolon*; *Cybernoid II*, more of the brilliant same; and *Stormlord*, an arcade adventure with detailed graphics and lots of fairies.

All four are true landmarks in the eight years of Speccy games, and their finely balanced shooting/planning gameplay and of course large, colourful, well-drawn graphics need to be sampled if you're to hold your head high and speak knowledgeably in Speccy game-playing circles. *Cecco's Collection* costs £12.99 on cassette and £17.99 on disk, picked up a 92-degree rating in *Your Sinclair* and is essential if you don't already own all four games. Even the box is snazzy.

QUESTION TIME

Regular poke supplier Matthew Wilson of Brighton has got some questions and, perhaps a bit hopefully, has written to me for some answers. Amazingly, I can actually answer one of Matthew's queries – he wants to know if you can get Speccy software on cartridge. Years and years ago, when the Speccy was young and everything was made out of wood etc., some cartridge software was available which you could slot into the Speccy via a special interface. Despite the fact that Ultimate's early classics like *Cookie*, *PSSST* and *Tranz Am* were available on the format, no-one bought the things and there's probably a warehouse somewhere stacked to the roof with them.

Probably the only way to get hold of Speccy cartridge software now is by placing a want ad in Shopping Express, or by rummaging around amongst the red corduroy flares and suchlike at your local Oxfam shop. Matthew also wanted more info on a 128K upgrade as advertised recently by large-scale Speccy repairers Video Vault. Now I'm going to try and find out a bit more about this myself, but in the meantime if anyone's had their 48K converted into a 128K, let me know how it works by writing to the usual address.

POKES

Mark Taylor of Manchester has just humped his latest salvo of Multifaced pokes onto my desk for the good of all Spectrum owners. Huge thanks to him for that, and also for his perceptive and downright excellent idea of increasing this column's size by 50 per cent. Just think how much more news and opinion you'd get, all the extra tips and pokes I could fit in, the hefty pay rise for me...

GAME	POKE
Astro Marine Corps	45181,x (x=Lives) 45199,x (x=Grenades)
Rock Star Ate My Hamster	25241,9 25243,141 (Start with £90,000,000 instead of £50,000)
Footballer of the Year	35228,x (x=Number of goal cards)
Turbo Boat Simulator	37403,0 (Infinite lives)
Falcon Patrol 2	40969,34 (Immunity)

Robin Alway

SAM COUPE

TASWORD TIP

Barry Walton has just been generous enough to let me have an excellent tip involving *Tasword 2* (*TW2*) and *Address Manager 1* (*AM1*) by Lerm. Barry's tips allows you to alter the BASIC in *TW2* so that you can access *AM1* to print out your address labels. Here's what you do:

Have a copy of *TW2* and *AM1* on the same disk. Load and Run *TW2*, go into BASIC and do the following alterations:

Alter line 600 to read

```
600 IF a$="B" THEN GOSUB lab:
KEY 200,62: STOP
```

Then add the following lines:

```
2000 LABEL lab
2010 PRINT AT 10,1; "Go into
BASIC "; FLASH 1; "B";FLASH
0;AT 12;7;"OR";AT 14,1;"Load
Label Printer ";FLASH
1;"L";FLASH 0
2030 GET g$
2040 IF g$="b" THEN RETURN
2050 IF g$="1" THEN CLEAR
60000
2060 LOAD "autoadd"
```

Now Save the altered program onto disk by Saving "TW" line 20. This will overwrite *TW2* with the customised version – or you could run and save it from the menu.

When you run *TW2* and type your letter to whoever, simply select to go into BASIC then reply "1" to the prompt. *AM1* will then load and you can print out your labels. By altering the *Address Manager* BASIC in a similar way, you could elect to return to *TW2*, or indeed to any other utility.

Thanks to Barry for sharing that with us. Have you got any hints, pokes, shortcuts or wrinkles that could be printed here for the good of all Coupé owners? Really good tips win software, so send everything you know to me here at *New Computer Express*.

Robin Alway

PCW

X-RAY SPEC

Mark Hewson of Leicester writes in to say his *LocoScript* data disk has just gone on the blink, giving 'Missing address mark' messages when he tries to use it. Fortunately hhe e's got a backup, but wonders what caused it, and suspects that an airport X-ray machine might have had something to do with the problem.

Well, Mark, according to all the experimental evidence so far, X-rays have no effect on data disks. I'm sure your disk has just given up at random, as they do from time to time. 'Address marks' – which are actually magnetic blips – are like the grooves at the beginning of a record that the needle lands on; they get the disk motor 'locked on' to the disk. If these blips get corrupted by a magnet (for example a ringing telephone, a loudspeaker and so on) then the disk drive has nothing to lock on to, just as if you'd scrubbed out the lines at the start of a record so the needle had nothing to land on.

Disks can give up the ghost after a few months, or after several years; there is no hard-and-fast 'lifetime'. Although you can often re-format a corrupted disk and use it again, it's best not to trust it with anything valuable. And, as always, keep regular backups – copies – of everything.

Finally: never, ever try to pack your PCW disk drives with marzipan on a British Airways flight.

IN CONTEXT

Rumour has it that there's a new product on the way for the PCW. It's being described by its software company as 'a text editor... with a lot of new features not seen before'. Will this be a rival for Arnor's *Protext* or Locomotive's *LocoScript*? The company has had a couple of major successes already in the PCW software market; expect more details in a month or two. You want a clue? Not flipping likely!

PROTEXT ANSWER

Answer to last week's puzzle: how do you rename a file called simply .BAK, automatically created as the 'back' file when you re-save a file called just A: (or B: or M:)? You can't do it in *Protext* or CP/M, but it's easy using that old hacker's tool *LocoScript*.

$$$64,000 QUESTION

This week's puzzle. How can you 'protect' a file in *LocoScript* so that it can't be edited by anyone other than yourself? And no, it's nothing to do with CP/M. *LocoScript* ignores any passwords you set with SET.COM, for example. Answer next week, and the clue is in the title of this paragraph.

INSTANT TIPS

1. If you use window envelopes, put the recipient's name and address on line 7 of the letter. Put the date on line 17 and fold just under it.
2. Get a decimal point in *LocoScript* 1 with [+]SR, full stop, [-]SR
3. In BASIC or CP/M, pressing [f5] stops whatever's happening dead, and [f3] resumes it.

Rob Ainsley

MSX

SHOW CORRECTION

Firstly, a correction to my piece on the forthcoming All Formats Computer Show: the event is to take place on the 4th and 5th of August, so ignore the date mentioned previously. Also, Bruce Everiss has asked me to point out that the user groups between them have over 1,600 tickets to distribute throughout their membership, so if you are a member of MSX Central, or MSX Link, and you have not received a free ticket, contact them immediately. All being well, I will be attending this show, so see you at The New Hall of the Royal Horticultural Society on one of the above dates.

CD-ROMS

We keep reading about the so-called latest thing in computing, interactive video games using CD-ROMs and video disks, but if you have been an MSX user from the very start, you will probably know that MSX computers had this capability way back in 1985, when Pioneer introduced a system based around their LD 700 Laserdisc player, and the PX-7 MSX computer.

As the PX-7 computer was an MSX 1 machine, obviously the graphics would not be up to current standards, even if the backdrops are of TV quality, but even so, some really breathtaking games could be played using this system. If MSX had taken off like the Japanese had intended, we would probably all be using our MSX 2+ computers to play some really brilliant interactive games. Still, it was not to be: the poor sales of videodisc players worldwide, and the failure of MSX to capture the UK market, meant that the system only became available in any quantity in Japan. But if you own a PX-7 computer, and can find an early videodisc player, all you need is the software and you can really impress your friends.

SWANSONG

Grandslam's latest (and probably last) release for the MSX is the game *Space Harrier II*, a full price game at £9.99.The game play is very much like the original *Space Harrier*, and although that game did not appear on the MSX in the UK, you must surely have seen it in the arcades, or on other formats.

The first thing I should say is that the game loads on an MSX 2 computer, so it should run on any MSX 1 as well. Obviously, it is very much like the Spectrum version, as we have come to expect from Grandslam. This is not always a bad thing, as sometimes what a game loses in the graphics department, it makes up for in playability. This is partly the case with *Space Harrier II*, and although a touch of colour would have been appreciated, at least all the moving objects scroll fairly smoothly. Sound effects and so on are very good, and the game is difficult enough to keep you entertained for hours.

As you probably know, I love shoot-'em-ups, and although I found this game difficult to master due to it being a vertical scrolling game with pseudo-3D effects, I think most of you will think it worth the asking price. As such it is recommended.

Keith Neal

C64

WHAT'S IN A NAME?

Many of you must have got copies of Paul Gascoigne's football game, and those of you who watched the World Cup semi-final must have felt a wave of sympathy for the lad when he broke down in tears. Dry your eyes, Gazza – oops, I'm not really allowed to say that. Did you know that the word "Gazza" is now the copyright of Paul Gascoigne Promotions, and cannot be used on T-shirts and other such merchandise by mere mortals like ourselves? Pathetic, isn't it? I shall never play his football game again.

SORRY TO INTERRUPT

Last week we also saw a mini-machine code program that appeared to do nothing. What we have achieved, though, is to divert the 64's interrupt system (keeping an eye on the clock, and so on) away from where it wants to go and on to where we want it to go. Now all we have to do is put some flashy sprite and sound routine in there, and we have the secret of a great game or demo program. But remember, however much code you put in, you MUST end up with a JMP $EA31 command at the end of it all, otherwise the 64 will grind to a halt.

To demonstrate, having interrupted the interrupt (so to speak) last week, we can now enter a little bit of code, like this:

```
C00D LDA $C5
C00F CMP #$3C
C011 BNE $C016
C013 INC $D020
C016 JMP $EA31
```

Now you could enter a BASIC line something like FOR I=1 TO 10000:PRINT I;:NEXT I and, as it prints up the numbers, press the spacebar and note that the border colour changes without slowing down the BASIC stuff. Wonderful things, interrupts, so why not try some routines of your own? Don't forget JMP $EA31, though – that would be a disaster!

Pete Gerrard

NEW MAG

And finally, here's some good news for any C64 owners who'd prefer a little variety in their reading matter. Future Publishing – those nice people who bring you *Express* every week – are about to launch a brand new games magazine dedicated to the C64, called *Commodore Format*.

Editor Steve Jarratt (ex-*ZZAP!*, ex-*Commodore User*, ex-*ACE* etc, etc) wants to hear from you now! Letters, comments, cheats, tips, maps and demos will be gratefully – if not prize-awardingly – received. So If you own a C64 and want to be involved in a little bit of history, get your stuff sent to *Commodore Format* at Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. The first issue is due on sale September 13, so get cracking!

QL

VIRTUAL REALITY – SORT OF

It's interesting to see the excitement about 'virtual reality' among the software houses. This is the technique used by outfits like NASA, with separate display screens for each eye. With appropriate software, amazingly realistic 3D simulations are possible.

Oddly enough, this technique was pioneered on the QL, with a game emanating from France called *The Wanderer*. Using red and green wire-frame images, offset from each other with software, and spectacles with a red filter in front of one eye and a green filter in front of the other, a reasonable 3D effect resulted, similar to that achieved with the old 3D movies like *House of Wax*. The game itself was a bit crappy, but the system obviously had possibilities.

ADMAN SERVICES

Dennis Briggs of Adman Services has got a well-deserved reputation as a fount of knowledge regarding all things QLish, especially hardware problems. He has a good stock of spare parts, which are available at very reasonable prices.

Dennis has designed one or two useful hardware goodies himself, such as a simple adapter for the QL expansion port, enabling up to three peripheral devices to be attached. They are "folded over", so that they are beneath the main circuit board. Using this gadget, someone has even built a 3.5-inch disk drive into his QL case, replacing the Microdrives, together with the controller board.

Dennis also has an EPROM cartridge, capable of taking a 512K EPROM. The cost of the cartridge is around £10.

Adman Services is at 53 Gilpin Road, Admaston, Telford, Shropshire TF5 0BJ. Telephone: (0952) 255895. Dennis is always prepared to help with problems, if they are sent to him in writing accompanied by a stamped, addressed envelope..

TEBBY IN FRANCE

As you read this, Tony (Qjump) Tebby will be on his way to pastures new on the other side of the Channel.

This really will be the end of an era, as Tony is unlikely to be doing any more work on the QL, and will be concentrating on much more lucrative consultancy assignments in the future.

Tony was largely responsible for the QL hardware, and also developed QDOS – the QL's unique operating system. It is still streets ahead of every other personal computer operating system that I have come across, in allowing modifications and enhancements. Try doing that with AmigaDOS, TOS/GEM or MessyDOS!

Most of the Qjump products will continue to be available from Care Electronics. Care is at 800 St. Albans Road, Barston, Watford, Herts WD2 6NL. Tel: (0923) 672102.

John Torofex

BBC

FRIEZE OUT

Last week I gave you the low-down on two excellent new software products from ESM, called *Frieze* and *Kaleidoscope*. This week I am giving some enterprising person the chance to walk off with a copy of *Frieze* (worth £35). There are just two qualifications. First, you must be involved with education in some way, and second, have an idea for the program's use. Write in to me c/o *Express* giving your name, establishment, and a brief two-line description of your idea.

The sender of the best idea will win *Frieze*, but all entrants will receive something!

BREAK OUT

Everybody has hit the BREAK key by mistake at one time or another and cursed the result, but is it so final? Well, BASIC programmers, of course, will know that you can often recover your program by typing OLD, followed by RUN. Machine code programs are rarely so well behaved, however, and in any case your data is very likely to have been corrupted.

Overcoming the BREAK bogey is possible, if you use a few strategies. First, you can physically lock the key, as on the Master 128, but this is not an elegant solution. A better solution is to set error trapping in your programs to detect when it is pressed, and a more permanent method is to reprogram it in your !BOOT file.

Andrew Brown

ARCHIMEDES

PACK A MAC

There are an increasing number of rumours about a Macintosh emulator for the Arc, though it's not clear whether this would be based around an add-on 68000 podule or a purely software solution.

It's known that several companies are working on 68000 software emulators, though I've not heard of any that are in an advanced state. The idea of emulating the specialist ROMs or video chips of the Amiga or Macintosh has always been thought too processor-intensive.

A hardware podule might make more sense, particularly since it seems to be getting easier to obtain semi-legitimate Mac ROMs on the open market. With an emulator working on its own host processor, the kind of speeds needed for a Mac Plus are more attainable. It'll be interesting to see whether the hardware solution is in fact the one chosen.

WATCH THIS SPACE

There are lots of little enclaves of activity in the Archimedes world, where hardware specialists and ace programmers sit ferreting away at interesting projects. A phone call to a contact this week shone light on several new products, which may well show themselves by the time of the *Acorn User* Show in September.

The first is a 16-bit SCSI podule with 512 bytes of on-board RAM. This promises to have performance on a par or better than the Oak unit, but at a much more competitive price. It's in an advanced state of preparation, will come with its own operating system and may be the first of several products from the same source. These could include a super-budget 8-bit SCSI, perhaps costing under £100.

One product certainly on the way, said my contact, is a super video card intended for ultra-high res colour art packages. This is built to show up to 4,096 colours on screen at once, or 16 colours with a resolution of up to 530 x 512. Grey scales should be a working alternative.

The biggest and best thing to come out of the same stable is ultra hush hush. If it arrives on time it will certainly raise some Cambridge eyebrows. It's off the record at the moment, but again the *Acorn User* Show will be a likely launch for this.

The Westminster Exhibition Centre, from September 7-9th, could be an extremely interesting place to be for Archimedes owners...

PC TO EGA

Getting more solid in probability terms as the column progresses, Acorn is known to be working on a revised PC emulator. It will offer EGA screen resolution and will be able to show a PC screen within a RISCOS window. It may well also be able to break the PC conventional memory limit of 640K. I wouldn't expect to see this before the autumn, though.

SECOND (AND THIRD) IMPRESSIONS

Computer Concepts' *Impression* document processor is to become part of a family. *Impression Junior*, at £103.44 will, according to CC, offer many of the features of the existing product, but without the laser drivers and the restriction of font style changes to the style menu – they do listen, after all. It will also lack any hardware protection system (hooray!) and will be fully upgradable to *Impression*, with built-in file compatibility. The product should be ideal for 1Mb Arcs and can run the full, check-as-you-type spell checker.

Impression 2, at £194, offers the flexibility improvements of *Junior* as well as the ability to show the flow from one frame to the next. Rulers can be placed around the page and extra fonts are included in the package. It's not yet available, but registered users of the current product are in line for a free upgrade. CC are on 0442 63933.

AS LONG AS YOUR ARM 3

ARM 3 chips are still not easy to get hold of, with the Watford boards thinner on the ground than the Aleph 3 products. The chip-sets themselves cost around £160 in small quantities, which is all most companies can get hold of, as VLSI aren't up to full production of the chip yet. It is rumoured that both Microsoft and Apple are considering using the chip in future graphics enhancement products.

Bertrum Carrot

ST

KEEPING TRACKS

I would like to bet that, in the next 18 months, making music on the ST will become all the rage. For users of PD sequencers upwards, the ST's built-in MIDI in and out ports and incredibly thorough catalogue of musical software will increasingly become their most important reason for owning an ST – yes, even more than playing the latest shoot-'em-up.

The latest addition to the MIDI scene comes from MPH, which has all but completed work on an upgrade to *PCB Tracker*, the four-channel, stereo music program that features a built-in drum machine, a sequencer and a mixing program. "No musical knowledge is required," boss Philip Harman tells me, to my depression (just think, all those tone-deaf no-hopers, happy at last to have found a music program that requires no expertise whatsoever).

"You can create music from either the ST keyboard (which is laid out like a piano)," he adds – a fact I must admit had hitherto escaped me – "or from a MIDI keyboard." Newly added features for this version include a volume control, loop control, special effects and a function to tune samples. "All this can be yours," says Phil, in best salesman voice, "using just 28 per cent of the processor time and in glorious stereo on the STE."

One of the nice things about *PCB Tracker* (in fact probably the worst thing about it is its name) is that Phil is working hard to make sure that after-sales service is up to scratch. Registered users get a quarterly newsletter, for instance, extra disks of .SPL and .MOD files and information of updates.

And he's intending to run a competition every month for the best piece of music created with the program.

PCB Tracker is to cost £49.95, and you can get full details of the program's spec by calling MPH on 0603 503382.

MIDIMAN MOVES ON UP

Hollis Research has updated *MIDIman* to include new control files (including those for the Roland D50-MEX, MKS-70/JX-10 and Yamaha DX 11) and a new tutorial to help users wishing to write their own profiles.

Also included in the update, which is being sent free to registered users, is *Performance* by Martin Russ, showing new ways of using the package in any MIDI setup. *MIDIman* costs £89 from Hollis Research on 0481 23169.

SUPPORT FOR YOUR ORGAN

Staying with the musical theme, there must surely be a number of people who own both an electronic organ and an ST, and would like to enhance the facilities and performance of the former by linking to the latter via MIDI.

Step forward J Sainsbury, who has written *MIDIdump* for use with the Yamaha Electone Multikeyboard range (and intends to develop the range if there is sufficient demand).

The program works by taking registration and other data via MIDI from the instrument and stores it, together with the data type and a name, as a data file in the ST's memory.

MIDIdump, available for both mono and colour STs, is available from J Sainsbury on 081-868 9607.

RAM PRICE DROPS

Frontier Software has announced price reductions on its range of ST memory expansion kits, attributing them to recent falls in the cost of DRAM memory chips. The Xtra-RAM 2Mb board, for example, which used to cost £299.99, has plummeted by more than a third down to £189.99. (On the STE it's even cheaper, at £169.99.)

Frontier's RAM expansion boards have sold over 5,000, according to marketing bod Martin Walsh, with the new prices leading Frontier to hope for sales of 10,000 by the end of the year.

To place your order, or indeed simply to congratulate Frontier on this success, call 0423 567140.

AN APOLOGY

A Mr Adam Wright of Northampton has sent half a dozen contributions to my request for ST limericks, all of them aimed at deriding the ST as compared to the Commodore Amiga games machine, none of which, therefore, will be appearing in this column.

Then – and talk about the pot calling the kettle black! – he has the cheek to add, "But seriously though, do you have to sink so low as attempting to ridicule the Amiga? I'm satisfied with mine, you're satisfied with yours, so what is there to argue about?"

Good point, Adam, and one I take to heart. I should therefore like to apologise unreservedly for any suggestion in this column that the Amiga is in any way, shape or form "£100 more expensive than the ST" and that it "falls over more regularly than a one-legged man in an arse-kicking contest."

I further wish to dissociate myself entirely from those who claim the "average Amiga user's disk collection is stocked entirely with utterly mindless demos and an extensive range of pirated and frequently pornographic disks."

Such accusations are entirely scurrilous and without any basis in truth. If anyone utters them again I shall sue.

Happy, Adam?

HOPE FOR SPRINGS ETERNAL

That nice man, that very nice man, Barrie Canning writes from Belfast to enquire about the ISM keyboard action set, which he insists he – or at least his ST – needs.

This peculiar package is in fact neither more nor less than a set of 86 springs, which you place under your ST's keys. The idea is that it makes your keyboard more responsive – something like the wonderful Mega 1.

Well, ISM can be contacted on 0983 867488.

Barrie would also like to know why there are no home computer shows in Northern Ireland: "As far as I can see," he says, "such a show would surely be successful." Maybe, Barrie, maybe, but I suspect that the English bias you imply is just an appreciation on a wider scale of what ST owners in Britain perceive in the concentration in and near London of most big shows. When did Wales or Scotland last have a full-scale show?

Thirdly, Barrie responds to my challenge to name any computer that beats the ST for power at a better price: "What about a second-hand ST?" he asks. Smartarse.

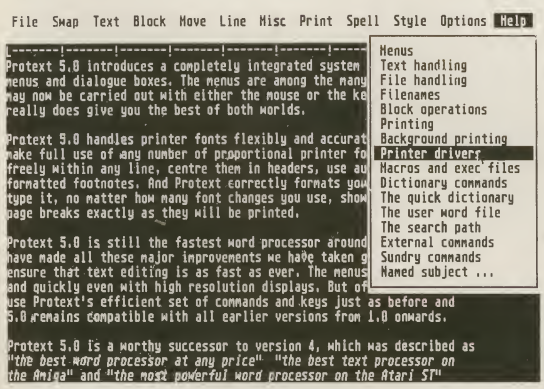
Fourthly and finally Barrie wants to know where *Express*'s Uncle Techtip has disappeared to. And there, I'm afraid, I can't help. I do know he's left *Express*, but he appears to have disappeared without trace. Special Branch finally caught up with him, I expect.

SPECIAL BRITISH MUSIC FAIR REPORT

Next week this column is proud to present an in-depth report from the biggest ever British Music Fair, held at the Kensington Olympia.

It was a show dominated by Atari STs, with two major trends confirmed by new launches and announcements: direct recording to hard disk, which is going to put the willies up all the major recording studios still working with magnetic tape, and home budget music systems, increasingly coming as everything-including-the-cables.

Steve Carey

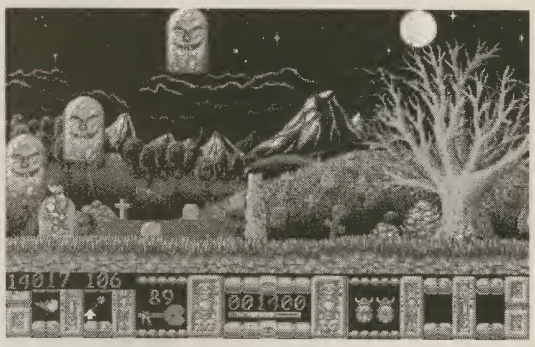

File Swap Text Block Move Line Misc Print Spell Style Options Help
Protext 5.0 introduces a completely integrated system
menus and dialogue boxes. The menus are among the many
may now be carried out with either the mouse or the ke
really does give you the best of both worlds.
Protext 5.0 handles printer fonts flexibly and accurat
make full use of any number of proportional printer fo
freely within any line, centre them in headers, use au
formatted footnotes. And Protext correctly formats you
type it, no matter how many font changes you use, show
page breaks exactly as they will be printed.
Protext 5.0 is still the fastest word processor around
have made all these major improvements we have taken g
ensure that text editing is as fast as ever. The menus
and quickly even with high resolution displays. But of
use Protext's efficient set of commands and keys just as before and
5.0 remains compatible with all earlier versions from 1.0 onwards.
Protext 5.0 is a worthy successor to version 4, which was described as
"the best word processor at any price" "the best text processor on
the Amiga" and "the most powerful word processor on the Atari ST"
Menus
Text handling
File handling
Filenames
Block operations
Printing
Background printing
Printer drivers
Macros and exec files
Dictionary commands
The quick dictionary
The user word file
The search path
External commands
Sundry commands
Named subject ...

• Revealed: the first, conclusive evidence that Arnor wasn't just telling porkies about version 5 of Protext. We were told there'd be GEM-type pull-down menus, and there jolly well are. This major upgrade of Protext is to cost £125, and for serious word processing types looks to be worth every penny.

FIRE & BRIMSTONE ST

GAME of the WEEK

MicroProse • £19.99



There are some game styles which are just too addictive to be true. Often, there's nothing particularly special about the programming talent required, but the graphics are outstanding. Such games have that 'just one more go' magic ingredient which many of the intense, sophisticated games lack. *Fire and Brimstone* has captured that magic ingredient and is destined to be a big success.

The game is played as a series of static screens. You start at one end of the screen, walk through to the other end and then advance to the start of the next, adjacent screen.

Walking through these levels you meet hosts of enemies and the key to success is finding the correct way to defeat them. You're equipped with limited weaponry which can be used to blast most of the bad guys. There are so many of them heading towards you that firepower sometimes isn't enough. Instead, you may need to climb a platform or work out another way of avoiding them.

Letting lose a blast of firepower on some of the bad guys isn't an advisable action. Occasionally you come across a sleeping enemy and you can walk straight past him without dying. If, however, you shoot him first, he heads straight for you and all the blasts in the world can't destroy him.

As you charge through the screens you can pick up magic potions which perform a variety of tasks such as building magic bridges, firing bolts of lightening to kill everything on screen and illuminating darkened rooms. The potions are represented as bottles and to collect them you need to leap into trees or on to platforms. Besides the potions, there are other bonus items. Some give you extra points and others provide extra lives.

Along the way it's imperative that you collect keys. If you forget to pick up any of the keys then you can't advance to the next level without going back to find the missing pieces.

***Fire and Brimstone* has all the ingredients to make it a sure-fire hit. Despite the lack of novelty and daring programming skills, the game style is so addictive you can't stop yourself returning for abuse over and over again.**

Mark Higham

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AMIGA

AMIGA TOPS ST

In the constant war between those two arch-rivals, the Amiga and the ST, it seems that our beloved machine has finally put Atari's baby in its place in terms of both machine and software sales. Recent sales figures from major computer suppliers show that the Amiga has overtaken the ST in every department. It's taken along time to happen, but we all knew it was only a matter of time.

In particular, W H Smith has reported that since recently taking on Amiga software, sales have far surpassed ST sales. As a result, the company intends to increase its involvement within the Amiga market. With the recent announcement by Boots that it is to stock the Amiga at Christmas, it seems that the ST's days are numbered! I don't usually like to get involved in the old ST vs Amiga debate (after all, anyone who has even the slightest idea about computing will now that the Amiga has superior hardware.

But then, hardware isn't everything...), but it does seem that the punters are voting with their wallets (and purses, of course!).

NETWORK NEWS

One of the major complaints levelled at the Amiga from the business 'big boys' is the machine's lack of networking facilities. In a large corporate computer system, machines must be able to talk to each other, sharing information and resources with ease and efficiency.

What is a computer 'system'? If you're a systems analyst (as I originally trained to be), the definition of a system is a series of different elements that are brought together either to aid the operation of each other or to work 'as one' to achieve a particular goal. As any 'professional' corporate computer user will tell you, life (and in particular, computing) is full of different systems.This is all important within the corporate market, and only now is Commodore making serious steps to improve the Amiga's situation within this area of computing.

Soon to be released by Commodore is its A2065 Ethernet card which is designed for use with the 2000 series upwards. The card comes complete with drivers to support Novell, NFS (Sun) and TCP/IP protocols. Although you may never of heard of it, TCP/IP is an all-important standard that has been adopted within the Unix environment. The board will be sold for about £350 per machine.

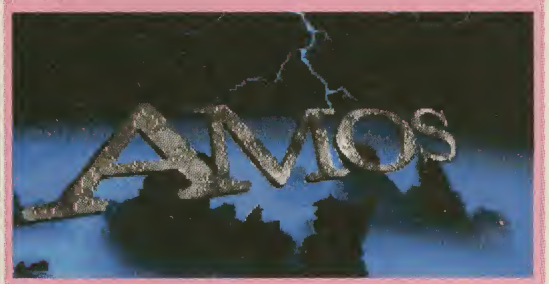
More interesting for most of us is the announcement of a cut-down version for A500 owners. The A560 Arcnet is a slower but lower cost network that should find favour among education establishments as it will allow many A500's to share data and resources, therefore making the cost of pulling together an effective system that bit cheaper.

SNIPPETS

- Xetec, the US-based producer of hard drives for the Amiga, has announced the release of its FastTape system for the Amiga. The system offers TEAC-SCSI cassette streaming backup for any Amiga. The device comes complete with all necessary driver software and a selection of utilities to make the task of backing up mass storage SCSI devices easy.
- Datel Electronics has released the follow up to its well-known Amiga sampler system, *Pro Sampler Studio*. *Pro Sampler Studio II* (they're an imaginative lot at Datel, you know!) has been completely rewritten in 68000 machine code to provide the fastest operation possible. It is also rumoured that the company has upgraded the hardware, therefore providing even better sound quality.
- MicroSpeed of Fremont, California, has released another alternative to Commodore's own mouse, in the form of the MicroSpeed AmTrac trackerball. MicroSpeed claims that not only does its new trackerball take up less than a third of the desk space that is usually required for a mouse, but it also provides a higher resolution and will probably outlast the vast majority of replacement rodents. It's also a damned good controller for games such as *Marble Madness*.
- Brown-Wagh, publisher of the highly acclaimed *Pen Pal* word processor, has released *BGraphics*, a sophisticated desktop business presentation system that can be used to produce presentation graphics such as charts etc. No specific details are yet available, but as soon as they reach my ears, then I'll pass them on.

Jason Holborn

AMOS EXTRAS DISK



How many of you have popped down to the shops and treated yourself to Mandarin's AMOS? By now, you'll already know what an astounding piece of programming it really is – Mandarin really has fulfilled all the promises and claims that it made about AMOS during the many months that we had to wait for the product's final arrival. With two disks packed with useful accessories and a bumper manual to back it all up, it seemed that Mandarin gave us just about everything that we could possibly ask for within such a package.

To prove still further the company's dedication to AMOS, Mandarin has announced the immediate release of *AMOS Extras*, a compilation of new and useful utilities to complement the AMOS development system. According to Richard Vanner of Mandarin, *AMOS Extras* contains many utilities which Mandarin originally wanted to include on the AMOS distribution disks, but disk space stopped it. "We could have made AMOS a three-disk package, but that could have complicated things for many people. We wanted to make AMOS as accessible to as many people as is possible."

The disk contains the new *AMOS Menu Editor*, which is a powerful utility to aid the creation of AMOS pull-down menus. The utility allows you to create complex menu structures containing text or even bobs. For musicians, *AMOS Extras* also includes the two music score conversion tools that were promised on the original AMOS to handle scores from *Sound Tracker* and Aegis' *Sonix* tool.

Sprites alive! *AMOS Extras* includes a whole host of bits for all you spritely AMOS users. For starters, you get AMOS *Sprites 600* free! Not only that, but there's even an IFF to sprite converter that will let you use a tool such as *DPaint* to design all your sprites. Finally, producing AMAL animation strings is suddenly very much easier with an AMAL editor which will allow you to create animation paths with the mouse pointer.

Most important of all, is the tool that every programmer who wishes to make money out of AMOS has been waiting for – no, not the compiler, but the AMOS Runtime system. RAMOS, as it is called, will allow you to create stand-alone AMOS programs that can be freely distributed (or sold!).

How can I get my hands on this?, I hear you ask. Well, if you've sent in your AMOS registration card, then chances are that it's already winging its way to you as you read.

WELLTRIS

AMIGA GAME of the WEEK

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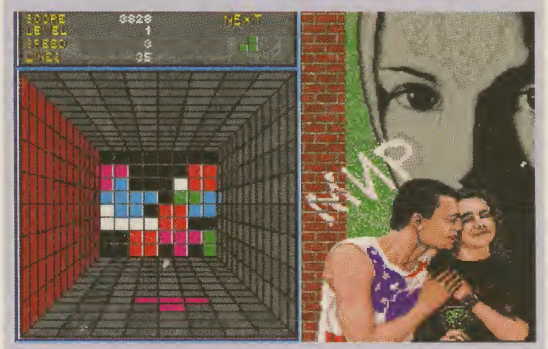

Speak to any puzzle game fan about their preferences and the name *Tetris* is bound to appear more often than many others. The simple falling blocks game has long held the crown of 'best puzzle game on computer' and has deservedly become a classic.

Years later, the game is still as playable as ever, so will anything be able to rival it? Possibly, since Alexey Pajitnov has come up with another stage in the continuing *Tetris* saga in the shape of *Welltris*.

Whereas *Tetris* was played in a vertical grid with the player trying to construct horizontal lines from falling blocks, *Welltris* takes place in a four-sided 'well' (hence the name). The tiles slide down the walls and along the bottom of the well, where the shapes fit together to form horizontal *and* vertical lines. Once a line is complete, it gets removed from the well allowing the other tiles to move inwards.

If a shape blocks up one of the walls, then that wall turns red and is locked for the next three shapes, and no tiles can be moved onto that wall. If all four walls become locked at the same time, then the game ends.

Welltris isn't exactly original, since it simply follows on from its predecessor. Having said that, the game retains all the playability of the original but still adds an interesting twist due to the addition of the extra 'planes'. It takes a while before the logic of moving around the walls makes sense, but once you manage to start thinking along the right lines then it soon becomes difficult to stop playing. In fact it becomes every bit as compulsive as *Tetris*! Ask anyone who has played the original and they'll tell you how addictive it really is!

Even if you don't think you like puzzle games and you've never played *Tetris*, get hold of a copy of *Welltris* and have a crack. But if you can't afford to spend hours at a time in front of your computer, think very hard before getting involved, since once you're hooked that's the rest of the week gone!

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PC

TO LIM OR NOT TO LIM

Amstrad has got itself into a bit of pickle by supplying a LIM 4 standard expanded memory driver on its 2286 PCs which does follow the complete standard.

There is at least one function call – function 24 – made by software using expanded memory which is not included in Amstrad's version of the driver software. When attempts are made to access this function, the Amstrad driver responds with the message 'Not implemented'.

The vast majority of software makes no use of this function, but a software house in Cambridge claims it needs to and that the PCs supplied by Amstrad do not therefore fulfill their advertising claims. The Advertising Standards Authority (ASA) is bringing the case to court on the software company's behalf. Amstrad is said to be worried that if the ASA win, many other cases could be raised along the same lines.

The ramifications actually go further than that, though. How about the number of printers that claim Epson or Hewlett Packard emulation? Or VGA card manufacturers who claim BIOS or register-level compatibility. Recent benchtest charts in the press for both categories of device suggest that compatibility is far from complete in many cases. If the Amstrad case makes it clear that conforming to a stated standard means every part, byte and function call, effects could be far-reaching indeed. The case could, in fact, bear heavily on the whole clone and emulation industry.

WHY WRITE FOR ONE LANGUAGE?

How would you guess the following piece of code from a program called `MYPROG.BAT` works, and for which language is it written?

```
GOTO begin
:begin
CD C:\
GEM BASIC2
\BASIC2\MYPROG.BAT
GOTO end
LABEL begin
REM Rest of program
code
:end
```

It's not that hard to guess really, except that it actually runs in two languages. If you this program on a PC with BASIC 2 and GEM on it – on hard disk drive C: – it will run GEM, BASIC 2 and then itself. The reason it can do this is that BASIC 2 doesn't demand that it's programs end with the filetype BAS. It's quite happy to run a program ending .BAT, which is also the filetype for batch files, of course.

When run as a batch file, control jumps to the label :begin, as the batch file processor doesn't recognise the word LABEL. The code after :label logs onto the C: drive and runs GEM with the application parameter BASIC 2. BASIC 2 can also take a program as a parameter and in this case its the program MYPROG.BAT. BASIC 2 runs MYPROG and on seeing the line GOTO looks for the keyword LABEL, ignoring the line :begin and running 'Rest of program code', instead.

On quitting BASIC 2, the batch file takes over again and the jump to the the label :end will exit the batch correctly. Sneaky and elegant at the same time.

This, and many other dodges are available in *The Help Screen Collection*, priced at £10.95 from *PC Plus* Mail Order, The Old Barn, Freepost, Somerton, Somerset TA11 7PY. Add £2 for a version with 5.25-inch program disk and £3 for 3.5-inch version.

NOT SO SMARTDRIVE

If you are using Microsoft's Windows 3 (over half a million people worldwide are) and have a large hard drive attached to your PC, there is a small chance that your hard drive could be corrupted. Only 12 verified cases of data loss have so far been established, and in every case it is connected with the use of third-party disk partitioning software and conflicts with the way Windows' *SmartDrive* disk cache tries to work.

The problem may occur if either:

- You use disk partitioning software and a hard disk with more than 1,024 cylinders.
- You use disk partitioning software and a hard disk which is not supported directly by the ROM BIOS and version 3.30 or higher of MS-DOS .

You can probably see why the problem is said to be rare.

The disk partitioning programs involved are *Disk Manager* from Ontract Computer Systems, *SpeedStor* from Storage Dimensions, *InnerSpace* from Priam Systems and *Vfeatures Deluxe* from Golden Bow Systems.

All of these programs install through device drivers which are loaded at start up. To find out if your machine uses such a device driver, move to the root directory of your hard drive and enter `TYPE CONFIG.SYS`. If the display contains any of the following lines, your system uses one of the four disk-partitioners:

```
device = DMDRVR.BIN
device = SSTOR.SYS or
device = HARDRIVE.SYS
device = EDVR.SYS
device = FIXT_DRV.SYS
```

Even if your machine is running such a driver, you need only worry if you have a hard drive with more than 1,024 cylinders (over 60Mb or so) or your hard drive is not supported by your PC's ROM BIOS. In either of these cases, the safest thing to do is remove the *SmartDrive* utility from your machine. Windows 3 will run quite happily without it, though you'll notice more hard drive access and slightly slower performance. *SmartDrive* is also installed as a device driver, so delete the line

```
device = smartdrv.sys
```

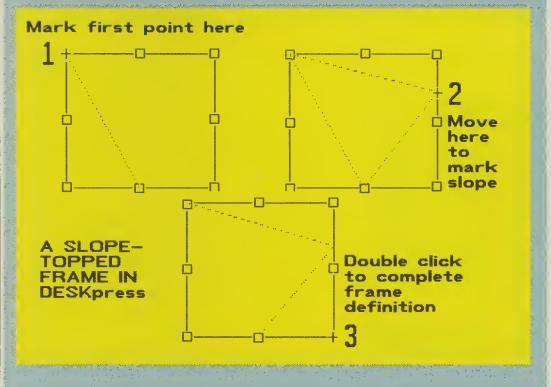
from your `CONFIG.SYS` file, or insert a REM statement at the start of the line to stop the device statement being executed.

TIPS WANTED

We all know how much fun MS-DOS can be, especially for beginners, if you know of any handy hints to help out, drop a line to the PC column at the usual address. good ones will be rewarded.

Simon Williams

LINING UP DESKPRESS



One of the major new features of *DESKpress*, GST's big DTP sister to *Timeworks Publisher* is its ability to wrap text round irregular shapes. The principle works like this; each half of any rectangular frame can be shaped independently of the other, from the top mid-point of the frame to the bottom. This means you can have a frame with one straight and one shaped edge, or with two shaped edges, perhaps for an inset between two columns.

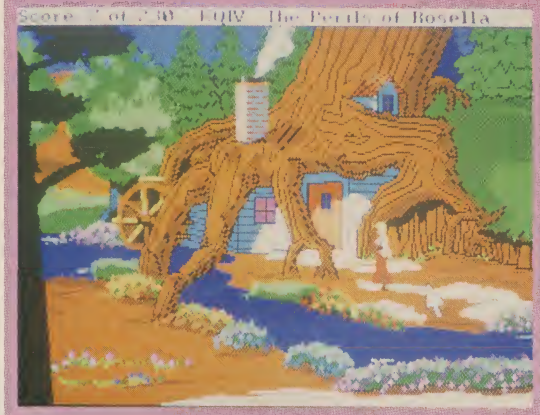
There is a slight problem when it comes to a frame with an angled top or bottom, though, it's more a problem of visualisation than any defect in *DESKpress*. The problem rears its head because it's not possible to raise any point on the altered frame outline above the top of the rectangular outline from which it's stretched. The top and bottom mid points of the frame are also fixed, so you can't drop the top mid-point down onto an angled frame-top.

What you can do, though, is stretch a point from one side of the frame onto the other. For example, if you want to create a frame with an angled top sloping down from left to right, you would alter the right-hand edge of the frame and place your first redefined point on top of the left-hand top corner of the basic frame. You can then angle the line down by placing the next point at the other end of the slope, somewhere along the existing right-hand edge of the rectangular frame. Double-click to complete the edge definition and the text will wrap down the new, sloped top edge.

KING'S QUEST IV

PC GAME of the WEEK

Sierra • £34.99



According to the cover, over 800,000 people have explored the kingdom of Daventry so loving portrayed by Roberta Williams over the past six years, which makes *King's Quest* Sierra's best-selling animated adventure series. Now here we are with part four, subtitled *The Perils of Rosella*.

For those not already familiar with Daventry and its inhabitants, Princess Rosella is the daughter of King Graham. She featured heavily in part three, *To Heir is Human*, where she played the victim. This time round she is the heroine, with not only her father's life but the whole future of fairyland in her hands.

The game uses the system adopted by Sierra for all its more recent adventures, last seen in *Leisure Suit Larry III* and *Code Name Iceman*. Each location is portrayed in 16 colours on a 320 by 200 resolution screen, giving a cartoon atmosphere to the game. The scene is three dimensional, in that you can move Rosella into and out of the picture, behind trees and so forth, as well as left and right. She can be controlled by cursor keys, mouse or joystick, although the mouse is particularly useful as she will attempt to walk wherever you click on the picture.

Many of the images are animated, so candles flicker, moonlight glistens on the sea and ogres chase you through the forest. But aside from the graphics the game is essentially a text entry adventure, as you still have to type most instructions on the keyboard in the time-honoured fashion.

As Sierra's longest running adventure series, *King's Quest* does not have the depth of vision of Origin's *Ultima* range. Nevertheless it is vastly entertaining, particularly – thanks to the appearance of characters such as the Seven Dwarves and the Frog Prince – to children of six to twelve years old. Good clean fun.

Matt Nicholson

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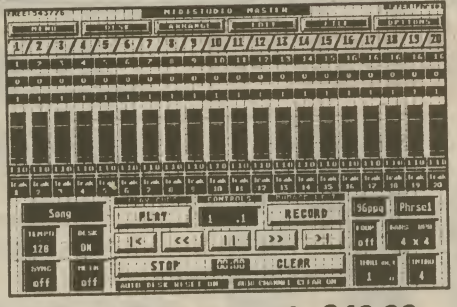

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THE SHOPPING EXPRESS GUIDE TO THE TOP WORD PROCESSORS

The most vital piece of computer software for most serious users is the word processor – many use their micro for nothing else. Here is the Express verdict on the best you can find for every machine

The most popular use for the micro is as a word processor. Its uses are many and everyone can benefit from it at one time or another.

Whether you intend to write to the *Times* as 'Angry of Pinner', write to thank Aunt Elspeth for the vellum bound copy of *Pilgrim's Progress* or send Jeffrey Archer running for the smelling salts with your latest thriller, a word processor is for you.

First things first, what is a word processor? It is an applications program that runs on your micro allowing you to use it as an intelligent typewriter. You can see the results of your typing before you print it and can correct mistakes, manipulate text and format documents on screen.

There's no need to print your document there and then, as it can be saved to cassette or disk and retrieved later for further additions, editing or printing.

The beauty of word processing is that you can set up and save commonly used layouts and letters and load them when needed to avoid repetitive typing.

Most word processors allow you to change margins and reformat text and any number of tab settings can be incorporated.

Common series of commands or keystrokes can be incorporated in macros in most word processors, allowing multiple commands at a single keypress. This is also useful for saving strings of text. Commonly used phrases, addresses and phone numbers can be assigned to a macro.

The more comprehensive (for which read 'more expensive') word processors generally have spelling checkers, mail merge facilities, word counters, and some of the better ones can even display italics, bold type face and different text sizes on the screen.

The ability to present the document on screen as it will appear on paper is known as WYSIWYG (What You See Is What You Get) and this feature is becoming 'standard' on new software.

To combine a letter with names and addresses in a database is called mail-merge and is especially useful to businesses who wish to send the same letter to different clients, or perhaps a student wanting to tailor a curriculum vitae to suit prospective employers.

Page numbering and titling can be handled by most programs, and some even allow footnotes, bibliographies and indexing to be incorporated.

As word processing becomes more advanced, features such as importing graphics, working on several documents at once and calling lists from databases increase the efficiency of a simple typist or a large multinational. We all need to write at some time, and the word-processor takes some of the drudgery out of the task.

This is the Express guide to the word processors available for each machine with a brief description of each. Prices shown include VAT.

PC WORD PROCESSORS

● KWORD 2
Kuma
£39.95

Budget-priced word processor with on-screen features such as bold and italic. Runs within GEM and can have up to four documents open in on-screen windows simultaneously.
0734 844335

● MANUSCRIPT 2.01
Lotus
£454.25

The heavyweight for the technical author. Not a general purpose WP. In a sense, it is more of a giant outline processor for imposing clear and flexible structures on complex documents. Handles cross-referencing, equation definition and tables. Imports Freelance and Graphwriter graphics and allows page previewing. Requires hard disk.
0753 32443

● MULTIMATE ADVANTAGE 2
Ashton Tate
£450

Primarily a secretarial package. Included are sophisticated mail merge functions, a card index database, a thesaurus and a 110,000- word spelling checker. Macros and line drawing possible. Choice of keyboard or menu control. Hard disk recommended.
0628 33123

● MULTIWRITER 2
Newstar
£114.95

Regarded as a relatively modestly priced WordStar clone, Multiwriter 2 offers macro learning and language facilities and can import WordStar, WordPerfect and Multimate files. Has mail merge, word counter and spelling checker.
0245 265017

● NEW WORD 2.18
Newstar
£114.95

Highly customisable and well respected WordStar-style WP with powerful mail merge, plus spelling checker and word counter. Uses the same keystrokes that WordStar enthusiasts know and love.
0245 265017

● OLITEXT PLUS 2.0
Olivetti
£355

A fast word processor with math and macro functions. Contains a pull-down notepad and calculator. WYSIWYG.
081-785 6666

● CELEBRITY
Software Paradise
£80.50

An unusually well implemented word processor for the beginner. Uncompromising attempt at a comprehensive suite of programs with a thesaurus, spell checker and the ability to open four text windows.
0222 887521

● PC WRITE 3.0
Sagesoft
£114.95

Footnotes, contents, mailmerge, multi-column, and other features make this under a hundred good value. Runs a little slow at times but is a good middle of the road program.
091 213155

● PROTEXT
Arnor
£100

Widely respected, not least among journalists, Protext stands out for its abilities in text and file handling. Built-in mail merge facilities are so powerful that it forms programs of its own. Choice of prompted word commands or menu system. Spelling checker; editable printer drivers.
0733 68909

● SPRINT 1.01
Borland
£172.50

An unusual and innovative package. Has drawbacks, including not being WYSIWYG, but offers emulations of common WP user interfaces (including WordPerfect, WordStar and Microsoft Word) plus full programming language for writing your own. Allows up to six windows on 24 documents. Saves changes while you type!
0734 320022

● SUPERWRITER 1.03
Computer Associates
£224

A fairly simple to use well functioned word processor with mail merge and spell checking facilities.
0753 77733

● TASWORD PC 1.17
Tasman
£49.95

Dead simple and cheap enough but damn slow. A domestic solution to a commercial problem.
0532 438301

➤

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AMIGA ACCESSORIES

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Phillips BM7502 12" green monitor.....£79
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Amiga To Philips cable.....£8

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1 Meg 3.5" internal £63
1 Meg 5.25" external.....£99

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Mannesman Serial Interface £49

REPAIRS FOR AMIGA AND ATARI

● TOPCOPY PLUS 3.0

Top Level Computing
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Up to three windowson six documents, pull-down menus, speller, word counter and all the normal word processing features.Imports ASCII and WordStar. Can run memory resident as a pop-up
0453 753944

● WORD 5.0

Microsoft
£395

A very good, sophisticated heavyweight word processor with excellent outliner.plus style sheets, maths, macros, and up to eight windows on the screen at any one time.
0734 500741

● WORDPERFECT 5.1

Word Perfect UK
£494.50

Not cheap, but this top-selling WP is generally regarded as superb. Lacks outlining, but among numerous attractive features are thtree-level undo facility, graphics importing and editing, macro facilities and on-screen columns.OS/2 version costs £575.
0932 850500

● WORDSTAR PROFESSIONAL 5

Micropro
£399

Years ago it became the 'standard word processor'. It has many features, and 'WordStar' keystrokes are the standard by which all other packages are judged. Version 5 offers an improved interface. It is a pity that such a popular package is still seriously flawed.
081-643 8666

● WRITER 1295

Logotron
£12.95

The low price of this budget software more than makes up for the snail's pace of its spelling checker.
071-359 3594

AMIGA WORD PROCESSORS

● PROTEXT

Arnor
£99.95

Protext is an easy to learn word processor with powerful text handling and file manipulation. The mail merge facilities are so comprehensive that you can look on the stored commands as a programming language for mail housekeeping. A good spelling checker and available on many other machines.
0733 68909.

● KIND WORDS 2

Amiga Centre Scotland
£49.95

Seemingly good value word processor for under fifty quid. Spell checker included and also the ability to import graphics. The current version includes A dictionary, thesaurus and various fonts. If you intend to upgrade to DTP, it's worth seriously considering contacting HB Marketing on 0753 686000 who include Kind Words in their 'Publisher's Choice' DTP package at under £100.
031-557 4242

● SCRIBBLE (PLATINUM EDITION)

HB Marketing
£49.95

The updated and upgraded version of the already popular *Scribble* . Very simple to use and with a spelling checker and mail merge facility. Text can be reformatted as you type. No graphic functions but very simple to use.
0753 686000

● WORDPERFECT

WordPerfect UK
£293.25

WordPerfect is a full featured heavyweight word processor with a price to match. This almost £300 package includes over 500 pages of manual and a huge dictionary /spelling checker/thesaurus. A Command line interpreter can be called from within the program simplifying the running of multiple environments.
0932 850500

ST WORD PROCESSORS

● FIRST WORD PLUS 3

Electric Distribution
£79.95

First Word comes bundled with the ST and for that reason, First Word Plus makes a logical upgrade with its ability to handle graphics and capture screens directly in the Degas format. Many good features such as column printing, mail merge, and a spelling checker, but the operation can be tedious and there's no index in the manual.
0480 496789

● WORD WRITER 1.0

Electric Distribution.
£49.95

What you see is what you get (WYSIWYG) The spelling, merging and thesaurus of this program are well integrated and all in all the program is easy to use. There are user definable routines and an intuitive typist will soon come to grips with it. There is no graphic importation facility and combining layouts in the same document is awkward.
0480 496789

● PROTEXT

Arnor
£99.95

Protext turns up on all of the popular machines and for sheer ability at handling text and files, takes a lot of beating. The same things that apply to the Amiga version, also apply to the ST Fully keyboard driven, ST Protext kicks the GEM environment out in favour of its own.
0773 68909

➤

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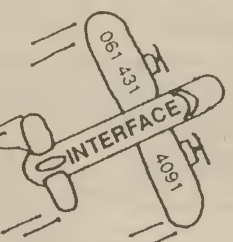

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● THAT'S WRITE

Cavendish
£99.95

This popular program puts the emphasis on the printed word and produces excellent hard copy. You can design a font, grab a screen or utilise the auto-indexing feature. There are many unique features but the manual is quirky and the WYSIWYG display has some weird fonts on screen.
071-323 4761

● WORDUP

HB Marketing
£59.95

More a document processor than a word processor, Wordup is the first step toward DTP having features such as graphics, text flow, graphic import, type sizes and styles. Ideal for producing newsletters and impressive documents. Unfortunately, there is no way of importing other fonts and a spelling checker is noticeable by its absence
0753 686000

PCW WORD PROCESSORS

● LOCOSCRIPT 2

Locomotive Software
£25 including p&p

LocoScript 1 is bundled with the PCW8256 and 8512. LocoScript 2 comes free with the PCW 9512. Therefore the obvious upgrade for all PCW 8256 and 8512 owners who want a little more speed and support for foreign character sets is LocoScript 2. They still haven't remembered the word counter and it still works at the speed of a snail in reverse but some people cut their teeth on Locoscript and will probably like it.

Strange that Locoscript 2, with all its fonts and foreign symbols and graphics abilities, is bundled with a computer with a daisywheel printer that has no need or use for it.
0306 740606

● PROTEXT

Arnor
£59.95

Protext PCW works under CP/M and is mobile between PCW and CPC computers (The same disk works in both, honest!). A stalwart user of Locoscript may grumble for a few seconds but the lightning fast file handling will soon produce another convert. Mail merging, column printing, two file editing and with an in-built spell checker. Using the M: drive it becomes faster than a speeding bullet.

If you own a PCW and you haven't got this program, you are wasting your machine's potential.
0733 68909

● MINI OFfiCE

Database
£30.00

Mini Office is a five-piece applications package of which the word processor is just one part. If you only type the occasional letter, want to store the family finances in a spreadsheet and catalogue your records in a database, buy it. If you have serious word processing in mind, it is probably not your best choice.
0625 878888 or 051-357 2961

● NEWWORD

Newtar
£70

A WordStar clone for people who were trained on that standard word processor and are unwilling to change. Flexible and powerful, but probably best left to those addicted to the original it is based on.
0245 265017

CPC WORD PROCESSORS

● PROTEXT

Arnor
£19.95 Tape
£26.95 Disk
£39.95 Rom

It is worth buying a Romboard and Protext, for the sheer enjoyment of instant loading non-memory-resident software. A couple of keystrokes and the program's there. No waiting around while tapes chunder or disks whirr. File size is limited to 22K (disk version) or 38K (ROM Version) but 38K is plenty long for a chapter of a book, so it isn't a real restriction .A straw poll of the journalists on Amstrad Action revealed that they were all using Protext on ROM. Enough said.
0733 68909

● MINI OFFICE 2

£14.95 Tape
£19.95 Disk

Part of the five-piece applications suite, the word processor is OK for the occasional letter but not really a contender for the hard work stakes.Bundled with database, spreadsheet, graphics and comms, it is very good value for fifteen quid, but only for occasional use.
0625 878888

● TASWORD

Tasman
£19.95 Tape
£24.95 Disk

Different versions for the 464, 664, and 6128 use the machine's features to the best advantage. The disk versions include a mail merger, and printer control is easy. An easy to drive program with a slightly slow text-handling ability but nonetheless, excellent value. A separate menu customises the program to run to your specification.
0532 438301

● BRUNWORD

Brunning Software
£30 6128 disk
£25 464 disk

A word processor, spelling checker and card filer that work in 40, 80, and 128 column modes. This excellent program is easy to learn, good value and just sneaks past Tasword as second in the CPC stakes. This one would be ideal for a small club or society who wanted to update their membership using a simple data filing system. ➤

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● EASY SCRIPT

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It's a good all round word processor that's no longer in production. Mail order houses are your best bet to find it. It only works in 40 column mode but has many features and is easy to drive. Good Value.

● PAPERCLIP

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This is reckoned to be the best C64 word processor around. It can work in 40 or 80 column mode, has a spelling checker and the facility to write your own macros. Two document working is supported and the only thing going against it is its lack of suppliers. Difficult to find but worth the effort.

SPECTRUM WPs

● TASWORD

Tasman Software
£13.95 Plus 2
£19.95 Plus 3

The only contender in the Spectrum market, with different versions supporting each machine. It runs very slowly at times, but puts the Spectrum firmly on the word processing map and has options to customise and speed up the routines. Plenty of help on screen and mail merging as well.
0532 438301

BBC WORD PROCESSORS

● WORDWISE PLUS

£56.35
Computer Concepts

An early offering for the Beeb that works in 40 column mode. 80 columns can be seen in preview mode. Very quick and intuitive.Plenty of help in the manual and a facility for embedded print codes, but be prepared to work at it. Macros are supported, and it is also available in the instant-load ROM format.
0442 63933

● INTERWORD

£56.35
Computer Concepts

Part of the 'Inter' integrated suite of programs. An easy to use 80 column word processor with spelling checker. ROM versions of the whole 'Inter' range available.
0442 63933

● VIEW 3

MicroPower
£44.95

This ROM-only 80 column word processor limits the size of document that you can use, but is nonetheless easy to use and functional.
0532 436300

ARCHIMEDES WPs

The Archimedes is capable of using BBC word processors, via its BBC emulation mode. To confuse matters even more, there are different versions of Interword, View 3 and Wordwise Plus, which work on the Archimedes under BBC emulation. The ROM versions of the BBC word processors will work on the Archimedes via a 'podule' which can be attached to an archie. An alternative route is to use a PC word processor under PC Emulation. A memory resident program might be the elegant solution.

● FIRST WORD PLUS

£79.95
Acornsoft

Ported from the ST, this program does everything that the ST version does and more beside. Printers are well supported, the spelling checker is quick and functional and there is a facility to import graphics
0223 245200

QL WORD PROCESSORS

● TEXT 87

£45
Software 87

Although the basic Quill comes bundled with the QL, this is a better option for the penning of serious work.It is quick, supports various fonts and can work in columns. The most powerful package for the QL

ATARI 8 BIT WPS

● ATARIWRITER

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This one is difficult to find, but years of trudging round looking are worth it. It has two column printing, two document editing , block facilities and a spelling checker.

● PAPERCLIP

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Again, you'll have to look for it, but it's still available mail order. Two document, two column mode, spelling checker and macros all supported.

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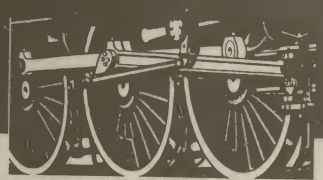

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Find out its limits. Look in the mirror.

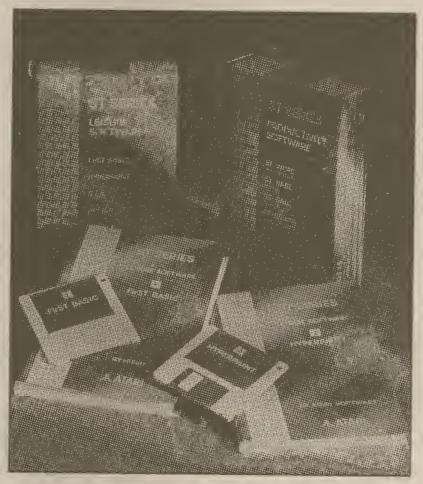
Introducing the powerful new Atari 1040 STE. With such an awesome machine, we're convinced the only limits you'll come across are your own.

Based on the incredibly successful 1040 STFM, the 1040 STE itself goes beyond the limits of its predecessor.

The 'E', by the way, stands for 'Enhanced'. But once you've discovered its amazing array of features, you may consider 'Enhanced' to be the understatement of the decade.

Perhaps the most outstanding feature of the 1040 STE is its graphics. Its palette contains over 4000 colours (all right, 4096 to be exact).

To ensure precise and realistic images, the STE features 'hardware scrolling', enabling smooth scrolling in any direction and split-screen effects. And, with the SM124 monitor, you'll get razor sharp black-out-of-white text that's as clear as the type on this page.



To complete the picture, it is able to 'phase-lock' its video output to an external video source, permitting direct linking to a Genlocking device.

The 1040 won't just have your eyes swivelling in their sockets. Your eardrums will also take a pounding from the 8-bit PCM stereo sound.

The new PCM (Pulse Coded Modulation) sound system's two chips allow the 1040 STE to replay high-quality sampled sounds, in stereo, without burdening the CPU. Or, for even more of an earblasting, just add a couple of RCA output jacks and power the sounds through your own stereo.

Of course we mustn't forget memory. One megabyte of RAM comes as standard. If that's not enough, the 1040 STE provides four SIMM sockets. Simply plug in some SIMM (Single In-line Memory Module) boards and boost the RAM up to four megabytes.

To help you handle all this technology, we've added even more: a Blitter chip, capable of shifting data at high speeds independent of the CPU, and a new version of TOS.

The TOS 1.6 (operating system) has an enhanced file selector with drive-change buttons, improved desktop with file move, MS-DOS compatible disk formatting, and better application installation and auto-booting facilities.

As you'd expect, there's a huge range of peripherals including hard disks, floppy disks, laser printers, colour monitors and even Megafile 44, Atari's unique 44-megabyte removable hard disk.

As well as all this hardware, there are hundreds of software programmes for the 1040 STE - we're even throwing in the ST-Series Productivity and Leisure bundles free.

The Productivity bundle features a database, spreadsheet, word processor and business graphics package, and there's S.T.A.C., FirST BASIC, Hyperpaint and Prince in the Leisure bundle.

If you're itching to get your hands on the controls, there are two 15-pin analogue controller ports (which accept paddles, light-guns and light-pens) and a 9 pin mouse port and joystick port.

With adaptors, up to six people can use the 1040 at one time. Just in case it's too much for one person to handle.

At £499.99 it certainly won't be too much for one person to afford.

The ideal computer at the ideal price, you may think. We think so, too. But there remains only one potential problem: not whether you'll make impossible demands of the 1040, but whether the 1040 will make impossible demands of you.

Please send me further details of the 1040 STE and other Atari products.

NAME: _____

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Please send to Atari Corp (UK) Ltd. Atari House, Railway Terrace, Slough, Berkshire. SL2 5BZ.

ATARI 1040STE

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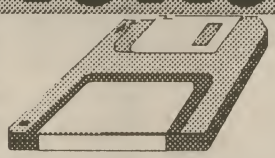

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1040 STE PROFESSIONAL PACK

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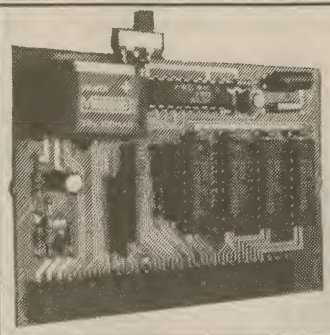

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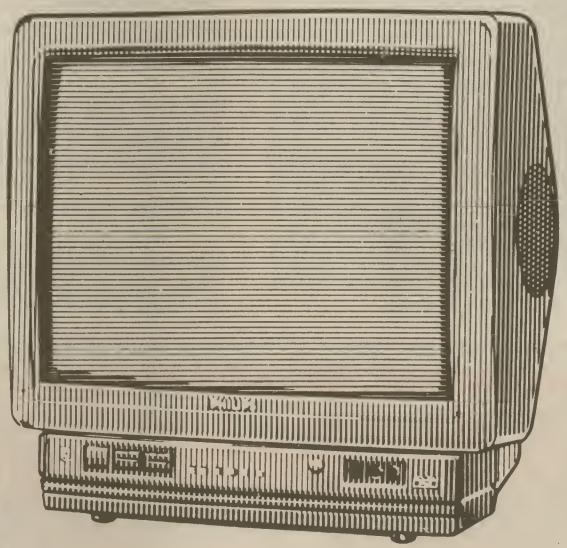

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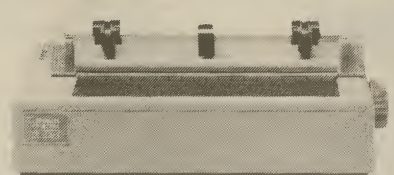

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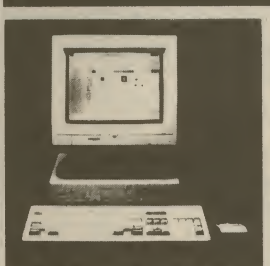

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PCS286 MONO	N/A / N/A	949.00 / 1091.35	1049.00 / 1206.35	1149.00 / 1321.35
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ACCESSORIES

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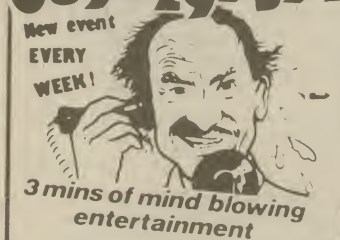

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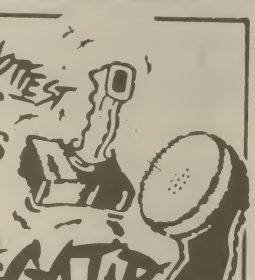

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TRS-80 model 3 hardware, software and information required. Tel Chris (0502) 562337 after 6pm.

STARQUAKE wanted for IBM PC will swap hostages, speedball, Boulderdash and Boulderdash II. Phone (04353) 3340 and ask for Michael.

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ANY BODY out there got a copy of the +4 programmers reference guide. To buy or borrow Ring Dave Elliot, on (0753) 7024.

BATPACK, Atari ST, Amiga (any sort) willing to give £100.00 081 994 6136.

MEMOTECH MTX512 has anyone got the SDX disc drive interface or Pascal rom for this computer. Please phone Chris 061 747 4815 eves.

AMIGA software and books, anything considered also two train sets for sale, used once £40 each. Tel (0294) 67086.

ASSEMBLY language programmer requires routines that directly hit the hardware. Having trouble obtaining keyboard input. All code to: Stephen Winstanley, 18 Charles Street, Colchester, Essex.

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WANTED Wizz digitiser, swap A4 hand scanner for PC. Unwanted gift. Tel 081 478 7868 after 6pm. Will pay cash difference if good condition.

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CHEAP back issues of ST Action wanted. Offers Write to Kim Pimmel, Spring Field Lodge, Kings Road, St Peter Port, Guernsey, Channel Islands.

WANTED Commodore A590 hard drive, offer £250. Also £25 per 1/2 meg filled memory. Phone Ian, Runcorn (0928) 701222.

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HAS anybody out there got any C64, C128 equipment surplus to requirement. Unemployed person trying to build up hobby without funds anything apprec. Thanks. Frank, 15 Brook Street, Brown Lees, Biddulph, Stoke-on-Trent Staffs ST8 6PG.

SUPERBRAIN QD wanted hard disc and controller card. Plus W.H.Y ring 061 790 6651.

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TECHNICAL manuals and diagrams wanted for Amiga 500 A590 hard drive and 1084D monitor. Reasonable offers. Phone 081 882 7336 after 6.30pm and weekends.

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THE PD COLUMN

There is a lot of software out there available for the price of a disk. This week Adam Waring looks at some of the amazing sound and graphics demos you can get for the ST, STE and Amiga

It's demo time again folks. This week's section is devoted purely to those masterpieces of coding from all those people with the strange names. Demos are really meant to be seen, rather than talked about. Besides, words just don't do them justice. So in order to cram in as many of them in as possible, I'll be as brief as I can about each one.

ST

Demo City claims to have absolutely loads of demos in its library. To prove it it has sent me what seems like half its collection recently.

The Delirious Demo II is exclusive to Demo City. It's been coded by those demo-writers extraordinaire, The Overlanders. *Delirious* is really a ten-in-one compilation. The main menu, though, is a treat in itself. As the mouse is moved around, lots and lots of pointers follow it. The result is spectacular, as streams of the things whiz all over the place trying to catch up with your mouse. Get to the demos proper and you'll be subjected to all kinds of weird and wonderful effects and scrolling messages – some as big as a house.

Batman requires a one meg machine. It displays the logo from the '60s cult TV series. The equaliser is, of course, made up from bat signs, flashing in time with the music. And the music? Brilliant! The theme tune plays continuously, with the Batman lyric sampled straight from the show's title track. Quotes from the great man/bat himself have been added. "To the Batmobile, let's go!"

ST Menu 6 may not be the most inspired name for a demo, but that's the name of a very inspired piece of coding. As you'd expect, there are six demos on the disk. One of them, the *Gen 4* demo was particularly good. The pictures are pretty, and the sound sounds good, what impressed me though, were the disk drives. Not only did it have the usual sound level display with bars jumping up and down the screen. In addition the disk drive lights flashed away to the beat! A cheap trick may be, but I liked it.

The *So What* demo from the Care Bears came to me courtesy of Sphinx Software. Now there are scrolly messages and scrolly messages, but this one boasts the biggest scrolly message I've ever seen! The multi-coloured characters take up the whole screen – including the border.

STE

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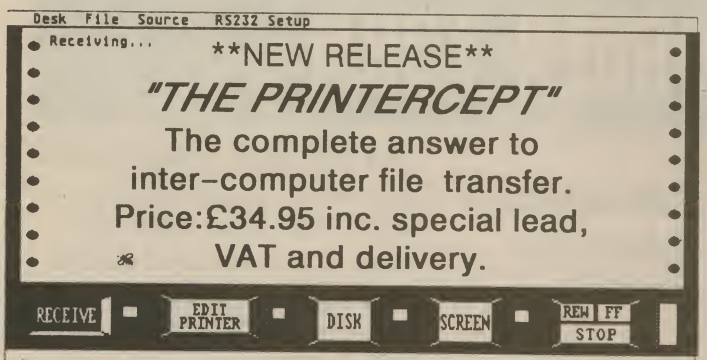

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mercial software may be slow to exploit the machines capabilities, but the demo-writers have far from ignored the beefed up beast. Most of the STE-only demos take advantage of the uprated stereo sound. Indeed, the three that came my way were all sound related demos.

The Sound off Demo from Goodman PD simply consists of eight little pictures. Click on one of them and it plays a sample related to that picture. The sound effects are of extremely high quality – blasting out both speakers. The sampled subjects are fairly obscure though. Anything from the Tardis shooting through space, to Amazonian pipe music.

The Fantasia Demo also comes from Goodman. It plays a very decent rendition of The Cure single, *In Between Days*. The sound is of unsurpassed quality – but I could be biased as a Cure track played on a kazoo would get the thumbs-up from me. Graphically, STE-only demos have a fair way to go before taking advantage of the computers uprated colour palette. That's not to say that they're dull to look at. Here, constantly changing geometric shapes make their way around the screen as the music plays.

Sphinx Software's STE demo is simply called *The STE Demo*. It's another soundtrack, once again showing just what the STE's improved sound chip is capable of. Jan Hammer's theme to *Beverley Hills Cop* plays away. On screen it spins a few balls about while it's at it.

AMIGA

Acceeeiidddd! It's true, Acid house makes it to the Amiga. The *Coma* demo from Riverdene PD will knock your brains out! OK, we've all heard the hip-hop soundtracks that accompany so many demos nowadays. This one really takes the biscuit.

As the music plays away, the screen shifts around some of the most amazingly hostile colours that your eyes are ever likely to experience. Every now and then an image flits across the screen. It really is one of the most together demos it's ever been my pleasure to see.

The Car Demo from Seventeen Bit Software simulates a high speed Police chase. The cop car is in hot pursuit of a fast red expensive looking vehicle, and chases it down the highway – on both sides of the road. Everything is done in a superb 3D environment. It really is quite stunning to see them weave in and out of the oncoming traffic.

Ever fancied going somewhere completely different for your summer hols? Why not give Mars a try? Best thing of all is that Amiganuts will take you there – free. Disk 627 is stuffed full of demos for the discerning Amiga owner. The trip to Mars is just one of the options open to you.

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WHERE TO GO

Demo City, 15 The Wynd, Dunshalt, Cupar, Fife KY14 7HE. Phone 0337 28159. Over 150 demos for your ST are just a phone call away. The library is almost certain to have any particular demo you're after. Exclusively in its books is the *Delirious II* demo. The programs cost £2.50 per disk. If you order ten or more the price drops to £2.

Goodman PD, 16 Conrad Close, Meir Hay Estate, Longton, Stoke-On-Trent ST3 1SW. Telephone 0782 335650. Goodman supplies PD of every description, including a wide selection of demos. STE owners are well catered for too.

Sphinx Software, Erw Fynydd, Carmel, Llanelli, Dyfed SA14 7SG. Another ST library with demos coming out of its ears. It too knows what it's like to be an STE owner, and cater well for that machine.

Amiganuts United, 169 Dale Valley Road, Hollybrook, Southampton SO1 6QX. Telephone 0703 785680. If you're nutty about your Amiga, then this bunch of nuts may be able to help you out. Most of its disks will cost you a measly £1.50.

Seventeen Bit Software, PO Box 97, Wakefield WF1 1XX. Telephone 0924 366982. Seventeen Bit are 16-bit specialist, catering for both STs and Amigas. It has a huge catalogue of PD-related bits and pieces.

Riverdene PD, 63 Wintringham Way, Purley On Thames, Reading, Berkshire RG8 8BH. Telephone 0734 428492. PD galore for both ST and Amiga. If you're an Amiga owning acid freak, then check out the totally wicked *Coma* demo.

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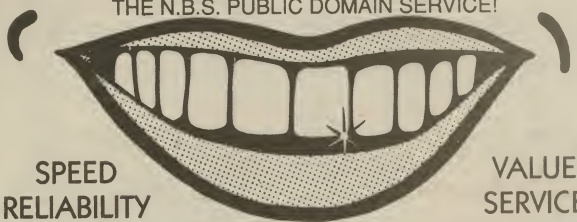

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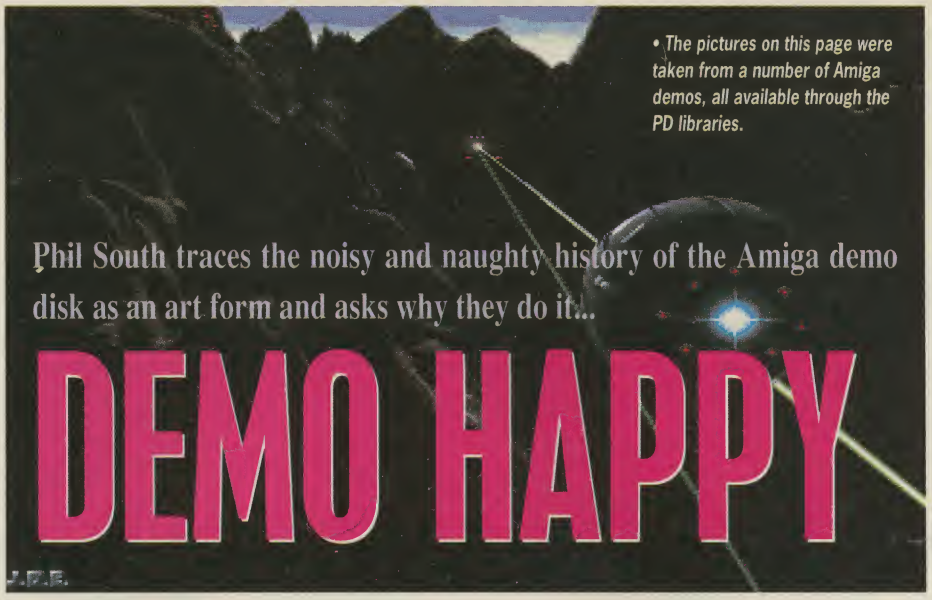

• The pictures on this page were taken from a number of Amiga demos, all available through the PD libraries.

Phil South traces the noisy and naughty history of the Amiga demo disk as an art form and asks why they do it...

DEMO HAPPY

Radical new technology-based art forms come along so seldom that often when something new does crop up it's quite hard to see the point of it. Never was this more true than with 'demos' on the Amiga. The disks full of colourful graphics and music are quite fun to watch but of no enduring value, or so it appears. But after a while a pattern emerges, and it's not the disks themselves but the reasons behind them that become the interesting part.

The Commodore Amiga, as you know, is an advanced graphics and sound computer, so it was inevitable that some new type of art would be created especially for it. Demos are music- and/or graphics-based disks of fun which are written by enthusiastic teams of coders and released into the public domain. The disks are passed around at computer club meetings and sold for a nominal fee to the public through PD libraries. They are varied in style and often quite stunning in their technical complexity, and yet they are given away to anyone who wants a copy. They do it for the fame, or more accurately the notoriety, of having their demos 'out there' with the people who run and love Amigas. But the art of demo writing has come on a long way since its inauspicious beginnings in piracy.

THE 64 CONNECTION

Demos have their origins in the infamous cracking teams on the Commodore 64. Ah yes, the crackers. Everybody used to know one; someone who used to collect games by obtaining a genuine copy of a game, studying its protection system, 'cracking' it so it could be copied easily using normal DOS copiers, and filing it in their capacious disk boxes. Soon it became possible to compact the games into illegal compilation disks, whereby the games were cracked, compressed using data compression programs, and the results stored on disk with a menu to select which of the five or six games you wanted to play.

The cracker started out being a fairly average coder, but as he (almost all were male) cracked more games he became better and better, until he was able to code quite sophisticated menus and title screens. Soon there was barely enough room on the disk for the games, what with all the music and graphics the cracker was adding at the beginning.

After that the intros, as they were now called, were much more important than the cracked games themselves, and so by dint of sheer hard work the cracker became a coder. As he produced more and more intros, he made contact with other coders and they formed a team or 'crew'. Some teams still crack games, but the majority of them are only interested in the intros.

Then, just as the C64 was pushed virtually to its limit with all the graphics and music they crammed into the machine, the Amiga was released to a suspicious Commodore community.

BRAVE NEW AMIGA WORLDS

The coders embraced the new machine with open assemblers, and soon the cracking started all over. They'd been getting bored with the same old protection routines and the Amiga had a totally new architecture for them to get their heads around. So the process began again, this time on the Amiga.

Games were cracked and stored – seldom played, as the cracking was the point of the thing – and again the intros the crackers added began to get better and

better. Boot block viruses were invented when some bright spark coder figured out there was some extra space on Amiga disk boot blocks big enough for a program to enter the computer unnoticed, and to run automatically when the disk is inserted at start-up.

Some cracking crews, like the notorious Swiss Cracking Association, utilised this space for viruses which propagated themselves onto other disks, wiping out the boot block of the target disk or even causing damage to other disk files. Other, less idiotic, crews used this space for tiny but effective intros to their cracked disks.

ROCK STEADY CREW

Amiga crews have been springing up like mushrooms in a warm cellar for some years, with bases in England, Finland, Sweden, Germany, France and Denmark. The crews congregate at what they term 'copy parties', where they meet in a village hall somewhere, connect up a bunch of computers and set about showing off their demos.

Obviously a lot of game copying goes on, totally illegal and reprehensible of course, but in the coders' minds this is secondary to the main business of them being the best coders at the party. They hold demo competitions and tutorials on how they do what they do. They stay up all night compiling demos from all the members of the crew, sorting them together on two or three disks and calling them 'megademos'. There's a lot of Amiga chat, and lots of other related stuff like music and other leisure swapping, like tapes and magazines.

The crews are an integral part of youth culture in most of these countries, and young people look up to the bigger and better crews almost as heroes. And when you look at it one way, they are worthy of some of the praise they get. OK, so they indulge in some illegal practices, infringement of copyright being the primary offence, but they are on the whole extremely gifted programmers, artists and musicians, on a par with the best computer musicians or commercial computer artists.

In fact, the end of the cracking-intros-demos-megademos cycle usually ends, not in the dock, but in commercial games programming. What often happens is that the demos the crew makes get better and better and then the crew suddenly vanishes, only to turn up programming the latest chart topping game some months later. The crews are snapped up by some software house which has been following their progress, collecting their demos, and just waiting for them to come out with an earth-shattering bit of coding, or some effect which suggests a likely game.

Then there are the demo collectors who stockpile the demo disks in the same way that some people collect records or CDs, and with the same motive; to have a collection of works which will be put on the deck in an idle moment for entertainment's sake alone. This is what demos are in real terms, the newest form of entertainment known to man. Part record album, part movie, part computer program, and part something completely new. Some are interactive, some passive, but all are on the screen for one purpose, and that is to give the viewer the ride of his or her life.

Demos fall into many different categories, with more being added all the time. The simplest are

WHERE TO GET YOUR DEMOS

There are a great number of PD houses offering demos for £1.50 to £3.00 a disk. You can find their ads in Shopping Express, but here is a selection of some of the biggest to get you going.

Newport Business Services
132 Gunbille Road
Newport
Tel: 0983 529594

George Thompson Services
Unit 1
Dippen
Brodick
Arran
Scotland
Tel: 077082 234

17 Bit Software
PO Box 97
Wakefield
WF1 1XX
Tel: 0924 366982

Softville
Unit 5
Stratfield Park
Elettra Avenue
Waterlooville
Hampshire

screens of graphics with a simple piece of music and 'scrolly messages', a scrolling line of text going across the screen saying hi to other crews, their friends and girls they quite fancy, usually laced with a lot of multilingual swearing and other young boys' big talk.

They also feature a lot of bragging about how good their crew is and how rubbish the others are, a topic also popular among rappers it seems, but also more interesting stuff like technical information on how the demo was made and the equipment they own. And just to show how much more above board it all is these days, they usually give their phone number for feedback on what you thought of the demo. It's loud and brash, sometimes embarrassing, sometimes disgusting, but always rivetting viewing.

Another type which is finding favour with more and more companies is the commercial game demo, where a software house will give you a brief taster of one of its new products. Sometimes they even let you play a level just to see what it's like, but in most cases you just have to sit back and watch the game playing by itself.

This is an excellent idea, and a type of demo which we are seeing a lot more of these days. Let's hope in future that this kind of games demonstration becomes the rule rather than the exception.

GAME PLAY

On the other end of the playable scale is the recent surge of PD games. Rather than just do a demo which you can affect by twiddling the mouse, the crew have actually come up with a game which you can play.

Obviously the programs only have very short development times (modern attention spans being as short as they are), and there is no commercial pressure to make them as good as they can be, so the quality is fairly low. But the quality of the games is slowly rising, and it won't be long before they will be as good as budget game titles.

The remaining demos fall into the categories of slideshows, intro collections, and pure music demos. Slideshows are disks full of pictures which fade, slide, swoop, drop and peel on to the screen in a variety of original ways. The pictures will either be digitised (either of nudes, pop stars or, in some more interesting cases, nude pop stars) or drawn using one of the many popular art packages.

The drawn graphics are of a broadly variable quality, with some being really talentless or bland but others being inspired, skillful and brilliant. The digitised pictures vary between tasteful fine art photos or paintings to out-and-out hard core porn. The porn comes from Europe mainly, and, as a PD librarian pointed out to me recently, this kind of stuff is weeded out of most PD library's collections. Which, as he put it, is a real shame as in some cases the coding is tremendous, and if it wasn't for the subject matter falling quite easily under the hammer of the obscenity laws they would be top-class demos.

Intro collections are just that, collected crew intros, stripped off of the cracked disks and assembled onto a single disk with a menu system enabling you to view any one you like. Lastly, one of the most interesting developments is the purely musical demo. Songs are remixed using sampling techniques, and the quality of some of these remixes is as good if not better than some of the records you get in the charts! Other more adventurous types use the sound chip in the Amiga to reproduce full scale classical works using soft synthesized timbres to very good effect.

THE FUTURE OF DEMOS

So where do we go from here? Well I've seen some sound and graphics demos which look and sound like pop videos – *Coma* from Static & Vandal springs readily to mind. Perhaps in future we'll see demo makers being snapped up by video companies to make real videos for pop bands. Or perhaps the crews *themselves* will become the bands, making 3.5-inch disks to add to the racks of CDs and cassette singles.

Having mentioned CD, there is another as yet untouched area of exploitation. With the Amiga CDTV coming out in September perhaps it will be CD-ROMs that the record companies will be releasing, and wouldn't that be a shot in the arm for the entertainment business? Either way it's plain to see that demos are the sharp end of something potentially new and exciting, for everyone to enjoy. Everyone who can see the wood for the trees, that is. ■

DEMO ARTISTS LOVE TO RAY-TRACE

• Sophisticated ray tracing techniques lie at the root of many demos' flashy graphics routines.

WIN AMOS, the Amiga game creator

Just the Word

£499.95 worth of prizes this week. Ten copies of AMOS, the amazing Amiga games writing program, will find their new homes with *Express* readers.

AMOS is only just out for the Amiga, and after all the hype, this is what *Amiga Format* said about it in its latest issue: "...for ultra-fast and animation, super-smooth scrolling and scintillating sound there is really only one choice ... and its name is AMOS."

If that's not good enough for you, this is what *Express* said in issue 89: "AMOS may have been delayed but it has been worth the wait... it's ideal for any program which requires fast graphics, animation, smooth scrolling and sampled sound. At £49.95 it has to be a bargain."

So for 58p, the price of the *New Computer Express* that you're holding, it's got to be seriously silly money.

AMOS is based upon an advanced BASIC language which allows you to manipulate sprites (you can have up to 64 on screen at any one time) and sampled sounds (import these from *Sound Tracker*, *Music Creator* and *Sonix* as well as creating your own AMOS-based sounds) and it will also let you go wild with blistering blitter objects. It doesn't bother with the machine's operating system, that's where the speed comes from. It also allows you to import IFF files in order to create the games of your dreams.

All you need do to stand a chance of winning a copy of AMOS is to leaf through this copy of *Express* in the hunt for the word PSITTACEOUSLY. It may be hidden in an advert, it may be secreted in editorial ... who knows?

Once you've found it simply fill in the form below and send you entry to AMOS Competition, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW, to arrive not later than Monday July 5.

The first 10 correct entries out of the hat will win copies of AMOS. The editor's decision is final. ■

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Did you enter our GFA competition? The first five winners out of the bag were:
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TECH TIPS

Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Keith Pomfret's Tech Tips and we'll soon see you right. Send your sorry stories to Tech Tips, Beauford Place, 30 Monmouth Street, Bath BA1 2BW.

HELP! Rice Crispies

At present I own a Commodore 64 with a Star LC-10C serial printer. Like many people, I am seriously considering upgrading to an Amiga A500. I was wondering if you could give me some advice about using my serial printer on the Amiga. I have consulted a friend's Amiga user manual and it says that you can use a serial printer once you have changed printer options in the Printer Options page on the Workbench package. As I don't know a great deal about how the Amiga DOS works, I was hoping that you could tell me whether or not you can load any piece of software via the Workbench and, if so, will it use the printer settings previously set on the Workbench?

For example, if you were to load any art package, would it assume that you were using a parallel printer and send any print commands to the parallel port, or detect the serial printer connected to the serial port, or is it possible to change the printer options on the Workbench to print to a serial printer, then load the package?
D W Lambert, Truro, Cornwall

To persuade the Amiga to drive a serial printer is a simple matter of going to the Preferences page on the Workbench, and installing the correct printer driver. There is a section in the Preferences page dedicated solely to the installation of printers and the Extras disk has several printer drivers for most of the commonly used printers and for the most common formats. Pick the correct one for your printer and follow the installation instructions on screen. If you get another printer, or you need to use a different printer, it's a simple job of installing the relevant driver from Preferences.

Some software comes with its own printer drivers, and you will need to check whether or not these support a serial printer. Some of the whizzier software packages even allow you to configure more than one printer driver and choose from within the program.

HELP! Printer of the 90s

I intend to buy the Amiga Class of the '90s pack in the very near future and was wondering which printer I should buy.

Included in the pack are several packages that would need a printer, for example *Publisher's Choice, Maxiplan 500* and *Superbase Personal*, so I decided to look for a printer in the pages of Shopping Express, where I came across the Olivetti DM100S advertised by Evesham Micros.

Could you please tell me whether the printer is compatible with the Amiga A500 included in the pack and whether it's a good printer to use with the packages mentioned above?
Guiseppe Vuolo, Bristol

Evesham Micros confirmed that the Olivetti DM100S is an Epson compatible printer, and as such will work with an A500 as long as the appropriate Epson printer driver is installed on the Preferences page (or in the software). As Epson printer drivers are provided (on the Extras disk), you shouldn't have any trouble persuading the Olivetti to work with an A500 and Class of the '90s.

HELP! Falling like ninepins

I recently upgraded from an Amstrad DMP 2160 9-pin printer to an Epson LQ-400 24-pin printer, having used a friend's Amstrad LQ3500 in conjunction with *Pagestream* and *Protext*.

I use *Pagestream* for strictly small-time DTP – mailshots for colleagues, posters etc. – and *Protext* for all correspondence and an expanding CV-writing service.

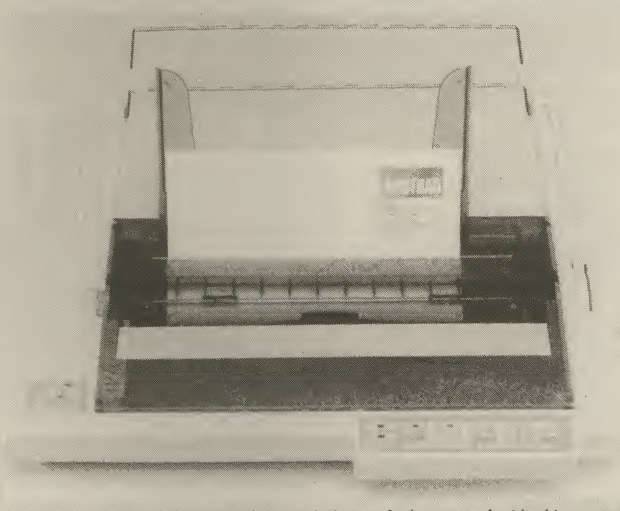
***Pagestream* works fine, and continues to amaze me with the quality of its printout. Incidentally, when I tried using the *Pagestream* EpsonQ driver with the Amstrad LQ3500 I continually got software failures and had to resort to using the EpsonX driver: the subsequent printout was inferior to that of a 9-pin printer!**

The reason for writing is that all is not well when using *Protext* in its Quality Print mode. If I print out text as draft then there are no problems, but if I print out using the Quality Print option, the top 15 or so lines of text are simply ignored, and so are text effects such as Expanded.

I'm typing this letter using *Kindwords*, which is OK, but *Protext* suits my needs far better and is in my opinion a superior word processor anyway.

I've configured *Protext* to Epson24 from the Configuration Menu, I've tried messing around with the dip switches on the printer, I've even tried praying, but all to no avail.

If you can't help, and I'm not expecting a miracle, please print my name and address so that if there's a reader out there who's experienced, and has overcome the same problem, they can contact me.
Patrick Cleary, 126 Northbrooks, Harlow, Essex CM19 4DF



• Working on a 24-pin impressed so much that an Amiga owner just had to upgrade.

The office copy of *Protext* works fine in the configuration that you've described, and a hurried phone call to Doug Thompson at Arnor said that he had never heard of the version number of *Protext* you have. The best remedy for your printer problems is for you to telephone the *Protext* helpline on 0733 68909, and describe your version number and hardware setup to them. They will be able to take you through the printer installation procedure.

HELP! ST RAM cards

In *Express* 78 you advised a reader about extra RAM (Rammed Home) which just plugs in to the Amiga user port. I am the proud owner of an Atari 520 STFM but I also suffer from lack of memory, so I would like to ask you if there is a similar plug in RAM card for the ST? Maybe there are even some cards which give the 520 more than one meg of memory?
Werner Park, Weymouth, Dorset

Those clever chaps up at Frontier in Harrogate are offering all sorts of RAM upgrades for the STFM and the STE. Although the STE is an easier machine to upgrade, your STFM need not feel left out and a call to Frontier on 0423 567140 should get you set up with up to 4Mb of RAM, although they are just as happy to add a mere half a megabyte.

HELP! Upgrade path

I am thinking of upgrading my current system of an Amiga A500, Star LC24-10 and *Protext*. I have two choices:
1. A hard drive (Commodore A590).
2. A cheap PC compatible.
My decision was to go for a cheap PC and I was wondering what you think of the Dolan 12MHz XT? I want a PC which has good upgrade facilities as at the moment I

have a budget of about £500. The PC will be used mainly for school work (and not games, 'cos I do have an Amiga!) and my new school is dominated by PC compatibles.

At the moment I am using my Sony KV-M14TU as a monitor for my Amiga via a SCART plug, and I am thinking of connecting it to the PC. What display standard will it allow me to use?

A potential use of the PC is for DTP, and I would like to make use of the Amiga clip art that I have collected, so I have rummaged through a PD catalogue to find software to convert Amiga graphics to a PC readable format. A GIF/IFF converter caught my eye (ouch!) from the Softville Collection, Disk No 24. It allows graphics to be shared between the PC, Amiga, Mac and Atari ST. Would you please investigate this for me, as it is a tad difficult without a PC at the moment.

And now... a tip – wow! If you press the two Amiga keys and C simultaneously in *Protext,* you are presented with a cursor-operated menu.

Another tip – If you press the two Amiga keys and CTRL simultaneously in *Protext* without saving, you will be extremely pissed off.

Thank you for printing my first ever letter to your magazine: and if you don't print it, it will be the last!
Raymond Wong, Horsham

We haven't had a chance to give the Dolan a good dose of scrutiny yet, but reports say that it's an adequate machine and would be suited to the purpose that you describe. The Softville graphics sharing program is a useful utility, but don't expect it to convert everything.

If you intend to use a PC, then it's a false economy trying to use a TV for your display. Even with a SCART connector (and Sony's SCART doesn't follow the true SCART standard), it is a difficult job to persuade a PC to drive a TV adequately.

By the time you've finished messing around with connectors and converters, you won't be any better off than if you'd bought a cheap PC monitor. As well as a fuzzy picture, you will not be doing your eyes much good. Decide on the graphics that you want from your PC and choose the appropriate display card and monitor. There are short cuts, but they are not worth it.

Also, remember that in order to use the same programs as your PC-dominated school uses, you will have to go out and buy the programs. PC programs are expensive and some of the serious programs and applications run into hundreds of pounds.

Don't think for a minute that if you take a copy of a program at school it will be cheaper. With rewards of up to £1,000 from FAST on the conviction of software thieves, greed will overcome an acquaintance and you will be visiting the magistrate.

Still, you don't sound like the sort of chap that would pirate software – but nonetheless, be warned.

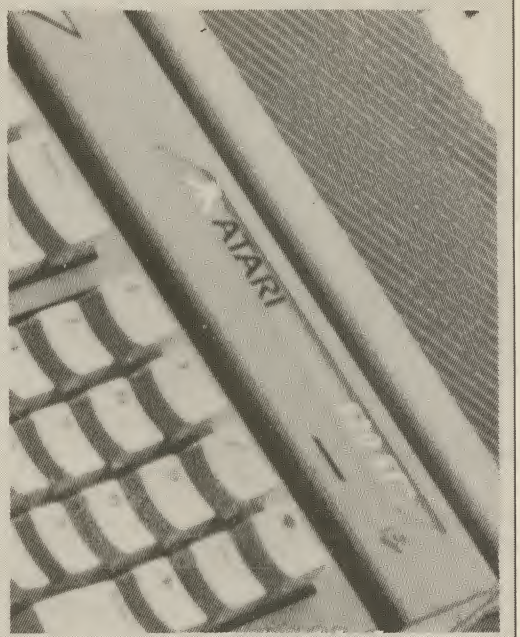
TIP Tonka Tipper

You recently asked for some tips for your column, so here goes:–

ST/STE
1) To get full colour dumps from your Star LC-10C, just use the JX80c printer driver in Degas *Elite.* (NB Degas *Elite* prints 'portrait' with this driver which is a bit of a tight squeeze on A4 paper. Make sure to align the paper about 5mm from the tip of the paper alignment triangle on the paper tray).
2) Users of the excellent *Fastcopy 3 program* can use it as a desk accessory instead of a stand-alone application by changing the extension from 'PRG' to 'ACC'.
3) STE users can reset their machines simply by holding down the 'CONTROL', 'ALTERNATE' and 'DELETE' keys simultaneously.
4) Pressing the 'ESC' key on the desktop re-reads the disk in the current drive (very handy if you have just undeleted a file).
5) You may sometimes have trouble getting the LC10 to load single sheets. If this is the case set the release lever to continuous, insert your paper as normal, set the release lever back to single sheet, pull the bail bar back and it should load the paper no problem.

IBM PC (CGA)
A friend of mine recently told me that if you run *Battle Chess* (from Electronic Arts) through GEM on an Amstrad CGA PC, you will get EGA colours! (I can't confirm this though, as I haven't got a PC).

AMIGA
Do yourself a favour and jump up and down on your Amiga when you very first get it. This saves disappointment when it breaks down after the first week.



• Plenty of tips for the ST and one for the Amiga...

Can anybody out there tell me if *Text Pro* by Abacus is available in Britain and if it's any good?
That should keep you going for one week, anyway.
Nial Grimes, Llanelli, Dyfed

Thanks very much for the tips, although I do have to point out that your remedy involving the size twelve Dr Martens would invalidate the guarantee.

HELP! The final solution

With regard to the Tech Tips letter from BTM regarding problems experienced with assembly language routines on an Amiga, here are some pointers:

1. The AlertMessage structure is:
1 word – x coordinate of text
1 byte – y coordinate of text
n bytes – the text itself, including zero terminator
1 byte – continuation byte

If you require more than one line of text, you must set the continuation byte to a non zero value (eg $FF) and follow it immediately with the next string structure.
2. If you want to write code to a specific address in memory, you must first request that memory from the system using the AllocAbs() function in the Exec library. Also, the dc declaration is an assembler command, not one of the 68000's instruction set. This is where your example code falls down.
3 You did not specify if you were using the PrintIText() or Text() routine to render your text into a rastport. However, there is no problem with the Text() routine located in the graphics library.

If you print extracts from this letter or my source, would you please mention that I have recently started an assembly programmers group for the Amiga (through your reader ads). Membership is free, and a monthly disk is sent by return to all members. This contains source, tutorials, requests for help and so on.
Mark Meany, 1 Cromwell Road, Polygon, Southampton, Hants SO1 2JH

Thanks for sending a disk of example programs. If BTM writes to remind me of his address I'll send it on. Your address has been included to ensure that you get all the assembly heads in the world writing to you. Good luck with the group.

HELP! Editor's revenge

5. Is *Express* in danger of losing its endearingly loopy sense of humour? I mean, you used to run pictures of mongooses. Where are they now? OK, so mongooses aren't very computerish; how about piccies of mice, or rams, or even monitors (you know, those big lizard thingies)?
6. I suspect that this is an incredibly naff question but is there any way I can import PD clip-art into my word processor (*Protext*)? Having shelled out eighty-odd quid for the latter, I'm loathe to further deplete my coffers by investing in a DTP program.
7. Re the 'Are consoles computers' debate: you contend that consoles are computing devices (ie, they take in and electronically manipulate data) and are therefore viable subjects for *Express*'s scrutiny. So shouldn't you be reviewing the latest developments in programmable washing machines, video players, hi-fi's, cameras and so forth? I don't mean to upset console fans, but...
8. Don't you think the function keys on the ST are sexy? (My computer's sexier than yours... Hmmm)
9. Wasn't Thunderbird 2 superb?
10. Do you publish every letter you get that contains the phrase 'I bet you won't print this...'?

If the answer is 'no', can I bet you a million pounds? If the answer is 'yes' then I bet you won't print this.
Alex Bond, Cleveland

In an endeavour to get letters down to a more manageable size, I have decided that all letters which exceed a certain size will be sliced into two right down the middle.

On this occasion, and only because this is the first ritual slitting, I'm saving the first half of this letter for another occasion. Anyway, to business:
5. No, not at all. look what we did to your letter.
6. No, not at all although rumour-mongers suspect an upgrade that can do that may be part of Arnor's game plan!
7.Yes we should, but the editor won't even spring for a bottle of Wisk, never mind a new washing machine.
8. No, and if you do you should be locked up.
9. Yes.
10. Sometimes/perhaps etc. ■

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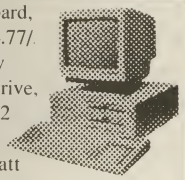

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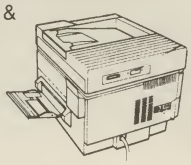

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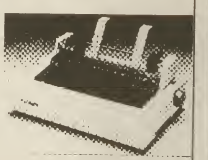

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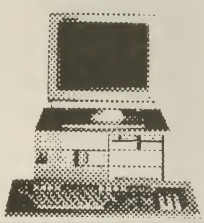

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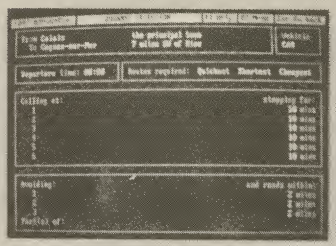
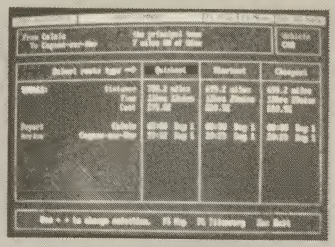
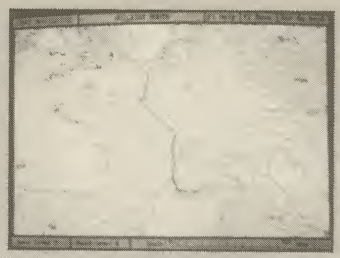
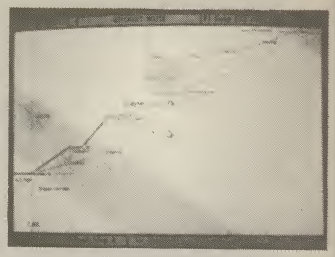








TOUR DE

Route planners have become one of the most popular pieces of software around, and now two have made the ferry crossing to France to help out with holiday travel. Keith Pomfret got out the Michelin guide..

"Bonjour, monsieur. Ou est l'autoroute pour Cagnes sur Mer? Vous m'aidez, s'il vous plait?"

With that being the standard of my French, asking for directions on the Continent is no fun, so I was pleased to receive a couple of packages which claim to make planning Continental journies much easier. Apart from knowing where to go, it's handy to know how to get there, how long it will take and how much the trip is likely to cost.

Road maps and atlases are OK if you're the sort of person who can scan the page with a practised eye, nod and know where you're going. Lesser mortals may find themselves fiddling around with with pins, scale rulers and pieces of string while referring to maps and flipping thorugh the pages of guide books. The manufacturers of the opisometer (the little wheeled beastie that can be pushed across a map to work out distance) must be quaking at the sight of these programs.

This approach to detailed journey planning can prove both time-consuming and tedious – so why not delegate the task of planning that Continental expedition to your PC?

Now you can, using either *Autoroute Plus France*, from NextBase or *Pan European Navigator,* which is distributed by NewStar Software. They are both route-planning packages which delegate the task of planning trips to your PC, but they take different approaches to tackling the same problem.

AUTOROUTE PLUS

Autoroute has been around for a couple of years, starting life as a computerised route planner for the UK that used cartographic information provided by the Ordnance Survey. At a stroke, it took the guesswork out of travelling the highways and byways of Britain.

The original *Autoroute* is still available in its basic form, but publisher Next Base listened to what users wanted and produced a revised and open-ended version called *Autoroute Plus*. Some of the less endearing features of the original were removed in *Plus*.

The open-ended nature of the new version allows extra features, such as hotel guides, to be integrated into the package. By purchasing add-on modules, the user can tailor the package to suit individual requirements.

This modular approach makes *Autoroute Plus* an ideal candidate for 'swimming' the Channel: now *Autoroute Plus France* offers detailed route planning facilities for the French road system. As a bonus, it also takes into account the French system of toll autoroutes when costing journies.

The system is easy to install, and runs on any PC that has at least 512K of memory and a hard disk. The package can be used in text-only mode, without graphical displays but to realise its full mapping potential, a graphics card is necessary. *Autoroute* supports CGA, EGA, Hercules and VGA but to be seen at its best must be viewed on a crisp VGA screen.

The opening screen displays a menu that offers the basic options to plan a journey: choose the mode of transport, set speeds and preferences as to road type, enter the start and finish points and the 'calculate' option works out possible routes.

This takes a few seconds per route (you can opt for the fastest, shortest, or a selection of journey plans), and you are then left with a choice as to what to do with the data that the software has generated.

A single keypress displays a map showing the entire journey. At first this map can be a bit disconcerting as it displays the roads on a black background, but there is a facility to change the colours and get it looking more like a conventional paper map. However the black version offers the best contrast.

Any part of this map can be enlarged – the zoom facility can take you down to an area the size of a small village. You can find the names of roads and places by pointing with the cursor and pressing the appropriate function key.

The different route options can be cycled through by pressing a function key – the active route is shown on the map by flashing the roads on and off.

From the map, a press of the spacebar takes you to a written set of instructions for the route, which can be printed out on most popular printers. The map can be printed out too, and with a good printer it is complementary to the listed route.

Because *Autoroute* covers every yard (and metre) of the ground in so much detail and has a system that can be added to and overlayed, the basic French version is likely to grow in the same modular way that the UK version has.

From the basic *Autoroute* program, gazeteers of places and overlays of information can be attached to suit a particular purpose.

Someone using it purely as a way of calculating routes will probably be satisfied with the basic £399 French package which mirrors the UK version of *Autoroute Plus*.

A coach firm or haulage business will be interested in the planned optimisation and costing module which allows detailed costings to be prepared for different vehicles and different routes so that the optimum method of moving goods around can be chosen.

An isochronic planner (which shows all the places which can be reached in a given time) and picture display module might be just the thing that the French estate agents are waiting for.

Companies wanting to pick a target market on the French mainland will find the post code add-on module invaluable and the Isochronic Planner will allow the selectionof post codes within a set travel time area.

The approach taken by NextBase to producing *Autoroute* allows you to add the facilities that you need when you need them. While the UK and France are currently the ony territories covered by the system, the modular nature of *Autoroute* would suggest that travellers to other European countries might soon be able to take advantage of other versions of the package.

NAVIGATOR

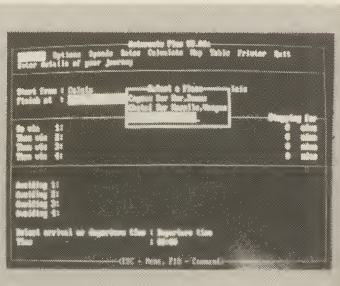
Pan-European Navigator comes from a completely different background to *Autoroute*. Designed by DPS, it is the product of several years of cross-frontier transport management and distribution.

It is targetted primarily at the company that wants a heavyweight no-nonsense fully-integrated transport package but there are different versions to suit each business and wallet.

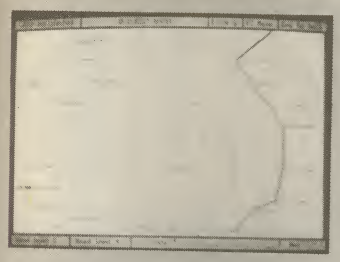
As well as covering the UK (there is a separate UK only version), the package caters for all of mainland Europe – including the bits behind the ex-Iron Curtain – and allows cross-border route planning and complex optimisation. It has been designed to cater for the needs of companies who might need to produce a local drayman's round as well as organise delivery runs from Leicester to Leningrad via London and Liepzig.

Navigator needs to be installed on a hard disk system and has similar hardware requirements to *Autoroute,* although it turns its nose up at a CGA display.

The current version is a little short on printer drivers, only offering a generic Epson driver, but facilities to run a range of printers from the clatteriest DMP to the sharpest laser are soon to be added. Once the program is installed and run, help and information are available as single keypresses and, as with *Autoroute*, areas of the map can be examined in detail. Detailed costing information for a number of different vehicles is included, and can be simply configured to



• Choosing the route through France with Autoroute. Destinations are chosen, the way calculated and a map or table displayed.



• Navigator plots its way south. Pick your starting point, calculate the route, then follow the colourful maps.

FRANCE

suit a fleet with several vehicle types.

In general, *Navigator*'s operation is intuitive and, with help screens readily available, the package can be handled by any reasonably intelligent person. The documentation is concise and simple to understand, and contains all the information necessary to install, configure and run the program.

The transport industry will be grateful for *Navigator*'s ability to calculate driver's breaks and work times while organising a schedule based around the relevant EC regulations. Rush hours can be taken into account as well, and busy periods that are likely to slow down progress can be entered on the basis of theory – or drivers' experience.

DEAD HEAT?

It's difficult to pick a winner from the *Navigator* versus *Autoroute* race. If it were purely a case of deciding which program suited the long-distance heavy haulier, *Navigator* would come out miles (or kilometres) ahead. *Navigator* covers the whole of Europe and, while in places its detail isn't as fine as *Autoroute*'s, it contains more countries and major destinations. The trucking or coach firm travelling the Continent wouldn't find it difficult to justify the investment of £1,719 in *Navigator*.

On the other hand, a company that operates exclusively in France (or the committed French tourist) is more likely to opt for *Autoroute Plus*. This open, flexible system doesn't demand such a huge capital injection to get started, and it can be tailored to individual requirements more easily.

As its name suggests, *Pan-European Navigator* offers route-planning facilities for the entire European landmass, and as such is considerably more expensive. It's a little unfair to compare it directly to *Autoroute*, which currently has less ambitous aims. Route wars may hot up over the coming months, however, especially if NextBase plans to expand its system with guides for other countries... ■

TAKING A TRIP

To put the French *Autoroute* and the *Pan-European Navigator* to the test, we took a trip to the south of France armed with *Autoroute* printouts, maps and a battered 2CV. Colleagues climbed into a shiny hired XR3i clutching copies of maps and itineraries and the *Pan-European Navigator*. They may have got the best car but who had the best route?

The journey was chosen as a compromise between a holiday trip to the French Riviera and a business trip passing by Paris, Lyon, Marseille and Nice. The rules were simple. Across on the midnight P&O boat to Calais, through customs together and follow the route to the letter. We agreed to take the quickest route on the way down and the most economical on the way back.

Both journey plans had been printed out while we were still in the office, and there were no great surprises when the two routes chosen by the packages were compared. Even with stops planned at Peronne, Macon and Lancon de Provence, both systems had given us the same 'quickest' route – only differing by one short road at the southern end of the journey and a strange detour from *Navigator*, which chose a 5-mile trip off the autoroute onto the RN2 north of Paris.

02:30 on a warm Saturday morning saw our colleagues in the XP3i sniggering as they watched us trundle off into the dark. Round the first anti-clockwise roundabout and we were in foreign parts.

Following *Autoroute*'s instructions took us a couple of miles along the N1 where we joined the autoroute. The steady drone of the 2CV kept time with the plan and a scheduled stop at the service area at Peronne was reached two minutes ahead of the predicted time.

We hit the notorious Paris Ring Road, the Peripherique, at 0600 (bang on time) and after a hectic eight minutes joined the A6 for the long haul to Lyon. We lost time between Paris and Lyon, but that was due to the monotony of that stretch of road (known as the black hole by those who use it regularly) and a snatched 15 minute break at Macon. Things picked up on the A7 and A8 after Lyon and we were able to regain some of the lost minutes. At Lancon de Provence we were ready for a spot of lunch and the 45 minutes allowed for the lunch stop proved adequate... just.

Back on the road for the last leg and the final 80 or so miles had us dropping off the autoroute and on to the RN7 at 14:50 – just eight minutes ahead of schedule. A couple of miles along the RN7 and we arrived at the Hippodrome, the large trotting track on the seafront at Cagnes Sur Mer.

The chaps using *Navigator* in the XR3i had followed the same route as us but had found plenty of space in their timings and adjusted their breaks accordingly. Their route had been calculated for a family car and hadn't taken into account the enthusiasm of a journalist unleashed on a French motorway in a sports car. Their expected arrival of 14:02 had been beaten by half an hour, even taking into account a detour into Juan les Pins caused by an errant road sign.

Navigator chose the A26, A1, RN2, Peripherique, A6, A7, A8 and RN98 for the journey, almost mirroring *Autoroute*, but it was on the alternative routes that the programs differed the most. After a few hours frolicking in the blue Mediterranean, it was time to trek back – only this time without the benefit of the speedier toll roads. We chose the shortest journey option from both programs and settled down to a gentle trip back to Calais and the duty frees.

Navigator chose a route timed at 12 hours 40 minutes. *Autoroute* picked a more pedestrian 15 hours and 51 minutes. A vehicle swap caused ructions with the other team, and with an XR3i and *Navigator*, we arrived back at Calais Maritimes in time for a late breakfast on Sunday. With the 2CV turning up at lunchtime, we joined the queue for the afternoon ferry.

On the Pride of Calais, P&O introduced us to its new Club Class Lounge where we plugged in a luggable PC and spend the 75 minutes of the crossing arguing whether *Autoroute* or *Navigator* chose the best route home.

DETAILS

AUTOROUTE

Autoroute UK	£150
Autoroute Plus UK	£344
Autoroute Plus France	£459

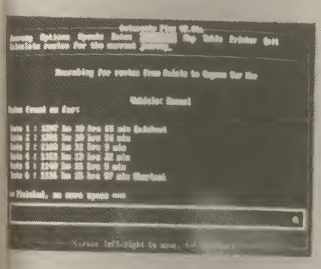
Add on modules include an optimising and costing unit at £230 and an isochronic planner at £286. French data modules include administrative boundaries and postcodes and start at £67. Annual map updates cost £57.

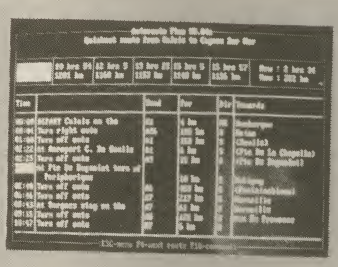
Next Base Ltd
Unit 18, Central Trading Estate, Staines,
Middlesex TW18 4XE.
0784 460077

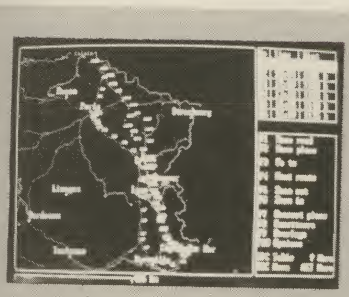
NAVIGATOR

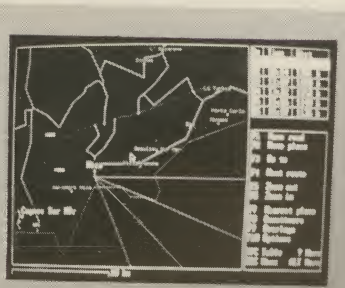
UK Personal Edition	£339
Pan-European version	£1,720

New Star Software
The Widford Old Rectory,
London Road, Chelmsford,
Essex CM2 8TE.
0245 265017









EXPRESS MAIL

Britain's liveliest computing forum – packed with comment, controversy and conflict. Write and tell us what you think! Reach us at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE. This week's replies by Keith Pomfret.

Out for the count

I wish to inform you that your recent 'find the word' competitions are far too easy. Just enter all the text of the magazine into a word processor and, hey presto, hit the word search key. I have enclosed my entry, it only took five days to find.

My reason for writing, however, is that I have been having problems with the disk drive on my IBM XT. I was wondering if it is possible to attach the 'super-reliable' Sinclair 'micro-drives' to my computer? I do miss them dearly.

I had an 'expert' look at my computer and he said it was a case of 'crap in my disk drive'. But how often do I have to do this?

Warren 'PC Plods' Chrismas, Bexhill-on-Sea, Essex

You win this week's star prize of a week's vacation at the Holiday Home for Pets Pie Company, for a neighbour's pet of your choice, for your interesting tip for competition entrants. Runner up in the 'I've nothing better to do than write to *Express*' category was Lulabelle De Beaujolais with a suggestion that you get members of an elocution class to read the magazine to you until you reach the offending (or offensive) word. We tried welding Microdrives to a PC but while the rugged metal case of an IBM PC-AT was up to our oxy-acetylene overtures, the plastic case of the Microdrive curled up and died at the sight of the torch.

Stuff for sale

I would like to use your letters page to advertise a forthcoming event being arranged by the CP/M & MS-DOS Users' Group.

Following the success of the 1989 sale, we are arranging another sale of second-hand computers, peripherals and software. It will be on Saturday September 15 between 10am and 2pm, once again at the Spring Lodge Community Centre in Witham. To ring the changes slightly this time, it will be finished off with an auction of those items not sold. The arrangements are that anyone wishing to buy a stand to sell their wares should contact me at the following address:

Roger Stangroom, CP/M & MS-DOS Users' Group, 11 Barwell Way, Witham, Essex CM8 2TY. Tel: (0376) 517496.

I shudder at the thought of CP/M and MS-DOS users sharing the same venue. As if it's not bad enough having half the adult population chanting "My Amiga's better than your ST" and the converse, are we to be treated to shouts of "My PIP's better than your COPY" and "My PROFILE.SUB's bigger than your AUTOEXEC.BAT"?

SAM support

I hope you don't mind me writing in, but I would just like bring our SAM Coupé software service to your readers' attention.

Every four months we put together a compilation of at least three SAM games, plus lots of utilities, graphical demos and many nice, original SAM screens which have been created with *Flash*!

SAM owners can obtain the disk or tape from us by sending just £7.00. Edition one contains well over 700K of software!

Also, a quick tip – you showed how to load in a *Flash!* typeface, but here is a much simpler way:

• SAVE a font to disk or tape from *Flash!*
• Reset the SAM
• Type in LOAD "Filename" CODE 20880,1096

When it has finished loading, the new typeface appears.

Jonathan Langford and Simon Field, Zenith Graphics, Kings Norton, Birmingham.

There's another twist in SAM's tail this week, as Messrs Miles and Gordon leave MGT in the hands of the receiver and set up another company dedicated to the support of their ailing child. To meet the pair of them in person, trek along to the All Formats Computer Fair at the Horticultural Halls, Victoria on August 4 and 5.

Agog on the Tyne

JUST A GODDAMN MINUTE!!! Keep your sarcastic comments about Tyne and Wear to yourself. Whilst I would totally agree with you that Jeff could be from another planet, there's no need to cast aspersions against good old Tyne and Wear. I, and the rest of us flat-capped, whippet racing, Broon Ale swilling, Gazza worshipping Geordies demand an apology.

Barry Walton, Whitley Bay, Tyne and Wear

OK, so maybe it was a bit unfair dispatching an entire race of people to a galaxy far far away, but I don't take full responsibility. It was in fact a government of the seventies who invented all the new boundaries that diluted true Geordieness.To redress the balance, we concede that Exhibition is a good pint, Lindisfarne was a good band, Newcastle United are even good on a black and white TV and the Five Bridges Suite is a good piece of music even if I did count six bridges.

Safe sects?

Casually mentioning to my mother that I was trying to enter a competition in which the prize was a 'mind-bending' machine, I was startled by her response.

She replied that these machines are on the fringes of the occult, and are either an expensive con trick purchased by the gullible, or are extremely dangerous (I can see a story in *The Sun* now, 'Boy daubs graffiti on wall after being put into a creative mood by 'mind-bending' machine given away by *New Computer Express*').

After careful consideration, and of my own free will, I decided not to enter the competition.

Perhaps you ought to substitute the original prizes with more suitable computer technology-related equipment?

John Shearing, Godstone, Surrey

I can confirm that *Express* isn't in the pay of the evil gurus from the Church of Video and Aural Sects. The machine in question is designed to help harmonise and integrate brainwave patterns with the environment around. Whether it does or not is purely a matter of personal taste, but if nothing else it does come built into a nice expensive pair of shades.

Sad for the 64

I was prompted to write after reading a letter from Dave Mason in issue 88 about Crystal Unicorn and Pete Gerrard.

I can only echo Dave's opinion of Pete Gerrard: he has done for Commodore what Alan Sugar did for Sinclair and then some and should be given the space, in your otherwise excellent magazine, that he rightly deserves. It's a sad fact that the C64/128 doesn't get the coverage that it should, and some software houses and publishers think that 16-bit is the be all and end all. Well, I'm here to tell you that just isn't the case – NOT ALL COMMODORES ARE AMIGAS! So if you own a C64/128, write in: let's stand up and be counted. Long live the C64/128!

Steve Thompson, Folkestone, Kent

If you want to see more about the Commodore 64 and 128, read on...

More 64!

I would like to commend Dave Mason for his excellent letter in issue 88 of *Express*, and for his support for Peter Gerrard and the Commodore 64. It is what I have been asking *Express* to give us for a number of months: MORE 64 COVERAGE!

Come on *Express*, you have the potential of being even more popular if you would listen to your readers. Look at a number of back issues, and you will see people, including myself, campaigning for better coverage for the Commodore 64. Instead you review *International 3D Tennis* for the CPC rather than the 64, when you have been told time and time again that the C64 has better graphics and

sound, but more importantly, it is more popular than the pathetic CPC computers. The C64 is the state of the art amongst 8-bit computers: you hardly see any CPC computers at Dixons or Tandy, instead you are met with C64s and Spectrums.

Having read many books written by Pete Gerrard, I feel that his knowledge of the C64 should be put to better use than in a column smaller than that of the MSX. Please tell me why the CPC has a full page, including a game review with a photograph, while the 64 does not even have a mention on the front page of *Express* (except under 'specialist columns'). Come on *Express*, get your act together, it would stop all us C64 owners continually writing in to complain!

Stuart Smith, Tyldesley, Manchester

Well, your comments about the CPC certainly are fighting talk. But we'll leave that issue to one side for the moment, 'cos there's something more important to tell you about.

Whinge no more, 64 and 128 owners. Fabulous Future Publishing, the company which brings you *Express* every week, is soon to launch a magazine just for you. Called *Commodore Format*, it will be the best Commodore mag on the market, complete with a cover-mounted cassette. And because of the increased machine expertise now coming to Future, the 64 and 128 coverage here in *Express* is set to increase real soon now.

So who says we don't listen to what the readers want?!

Acorn attack

It's time that someone did something about the stranglehold which Acorn has on the educational market. Its BBC machines were out of date when they were designed, were a hardware and software compromise and, because of some monopolistic licensing agreement, they are dragging our next generation of schoolchildren further and further away from the forefront of technology.

I recently left industry to return to teaching and was horrified to see these 8-bit leviathons, best suited to simple scientific tasks, shaping the minds and computer-literate futures of our youngsters.

What use is a student who has learned about computing on the BBC B (or even the off-white elephant Archimedes)? The student won't find these computers in the real world. In the world of commerce or industry, IBM and its clones reign supreme. In graphics, design, publishing and the much talked about multimedia, the Macintosh and the Unix workstation gather the accolades. Throw these toy BBC computers and all their peripherals in the trash and start teaching our kids about real computers. This pro-Acorn policy is making a mockery of the National Curriculum.

Reginald Smart, Digbeth, Birmingham

With a tolerance level about as low as a snake's armpit, and a singularity of mind that would have made Hitler look like a liberal, I'm sure your students will find you a refreshing mentor in their transition from childhood to responsible adults.

I'm sure the good people at Acorn will address your attack with more fervour and knowledge than I.

A little tinker writes

Having returned to computing after a break of several years, I feel I must write to express my horror at what has happened to the computing industry.

In my day, computers were serious, educational tools: they taught youngsters valuable lessons in logic and programming, and – you may laugh – they gave people like me many hours of happy tinkering as I tried to plumb the depths of my ZX81's memory map and get to grips with programming in quirky old Z80 assembler.

Now, though, all I see is games 'consoles'. What are these consoles? Whatever happened to hobbyist computing? As far as I can see, these so-called games consoles serve no other purpose than to titillate juvenile fantasies of violence and sex (I don't suppose for a moment you'll dare to print this). Having spent many years as a teacher in Northumberland, I think I can speak with some experience of the youthful mind.

Don't think for a moment that I am against fun of any kind. Nothing could be further from the truth. But please bring back the good old traditional home computer, and let's forget this console nonsense. There are plenty of ways for children to entertain themselves uselessly these days (cinemas, burger bars, amusement arcades etc.) without the added diversion of these 'toys'. At least with a ZX81 kids would learn something as they played.

I look forward to hearing your opinions on what I consider to be an alarming new trend.

Henry Morris, Exmouth

You show less tolerance than a fine micrometer. If the choice is cinemas, burger bars, amusement arcades or consoles, I think that the consoles win by several lengths.

Fantasy isn't the unhealthy animal that you paint but a tool of creativity that evolves from generation to generation. There is room for the text engine (conventional computer) and the graphics/sound engine (console).

If we followed your philosophy to its logical conclusion, we would have to do away with washing machines, engine management systems, ticket machines, road signals and anti-lock braking systems because the computers therein don't actually teach us anything.

32 reasons to smile

I had to smile on reading your cover story last week concerning the new 32MHz Atari TT. OK, so it's great to see Atari delivering, but isn't it ironic that in its original incarnation the TT was going to be based around the Motorola 68020 chip! Atari took so long in getting the machine into production that Motorola managed to develop a brand new chip – the 68030 – in the meantime.

This aside though, I must take you up on your comparison with the Amiga A3000 – you failed to take into account the latter's multitasking capabilities. In graphics and multimedia I would have thought this would give the A3000 the edge despite the higher price. And anyway, at this level of computing what does a a grand matter anyway?

Mike Neill, Brighton

It's good to see the benevolent side of the Tramiel empire showing through. It was certainly the work of a true philanthropist to allow another company to bask in its own glory before carrying away the 68030 to garnish the 32MHz TT. We on *Express* are much too poor to enter the 'My Amiga's better than your TT' debate at the multi-thousand pound level but if, as you say, the grand's not important, we'll have it. Ta. ■

Tale of woe from a stricken Amiga owner

I read about the blast-proof processors installed by mistake in some Amstrad computers (*Express* 89), which prompts me to write and tell you about my Amiga. I just wish Commodore produced military-spec computers...

In the year and a half that I owned my A500, it has suffered from more disasters (both natural and unnatural) than any reasonable computer should be expected to face in its lifetime.

Three days after I brought my shiny new computer home, I left it connected up to the TV with a game on pause while I went to answer the telephone. The phone call lasted much longer than I expected, and when I returned to the lounge I found that my baby brother had been sick all over the keyboard!

Fortunately, no serious damage appeared to have been done – but I spent the rest of what was scheduled to be a pleasant evening at home with my new machine, poking around its delicate little crevices with cotton buds dipped in Milton sterilising fluid. The keyboard worked fine, despite playing host to most of baby Keith's supper...

No more problems for several months, until the fateful day when I tripped over the power cable, knocked the transformer off the table and pulled the A500 onto the floor. A slightly cracked casing was soon mended with a strip of sticking plaster, but there was no need to phone an ambulance and send my computer off to the chip hospital.

A little while later, during a serious session of *Xenon*, excitement overcame me and I dislodged a bottle of pop I had placed on top of my new monitor. It crashed down onto the keyboard, emptying its contents over me and my Ami. Puffs of steam and smoke started coming out of the back of the casing – then nothing!

I wish I'd joined BUPA. Two weeks later I was nearly £70 poorer, but at least I had my computer back – and it looked and worked like new.

Then, two days ago, my dad was about to take me and my Amiga round to a friend's house – I'd promised to show him how much better my Amiga was compared to his ST. While we were packing a few things into the car, mum called me back into the house, so I put my computer down and went in.

Then I heard the car start – followed by a horrible crunching noise. Yes, you've guessed it. Dad had just reversed the car over my 16-bit super computer.

This time, the hospital pronounced my machine 'dead on arrival' – and it's not yet clear whether our household insurance policy will cover the terminal damage inflicted on it by the back wheel of a Maestro.

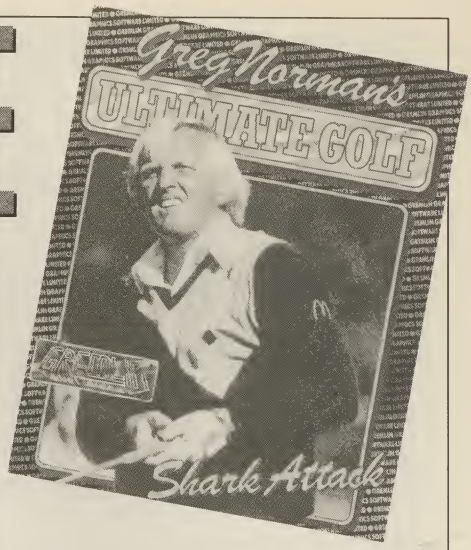
Did I just have the bad luck to buy the world's most accident-prone computer? Or (unlikely though it is), has someone else had more misfortune than me?

Gus Chandler, Harborne, Birmingham.

PS: Can the Husky play games? It sounds like my kind of computer!

It sounds as if the computer that you need is in fact the GRiD Tempest. The manufacturer assures us that a 38-tonne lorry can be driven over this military-spec laptop without it suffering any loss of data or damage.

DOWN TO A TEE



Tim 'Faldo' Smith takes a wedge of golf games and plays a round.

Last week's British Open was one of those sporting events which, like Wimbledon and the World Cup, forced thousands of otherwise normal men, women and children to go out on the parks and pavements of the world and attempt to play their favourite sport. In the case of tennis this is simply a case of getting hold of an old racquet, a wooly ball and a wall. Football requires a can or, if you're lucky, a ball. But golf is more of a problem. How do go out and pick up 18 holes, 14 clubs and a sun-hat on the cheap? The easiest way is via the golf simulation.

PATHETIC SHARKS

You could attempt to realise your golfing dreams with *Greg Norman's Ultimate Golf* from Gremlin. This is also known as *Shark Attack*, probably due to the fact that this is just what you want to happen to you rather than have to play the game more than once.

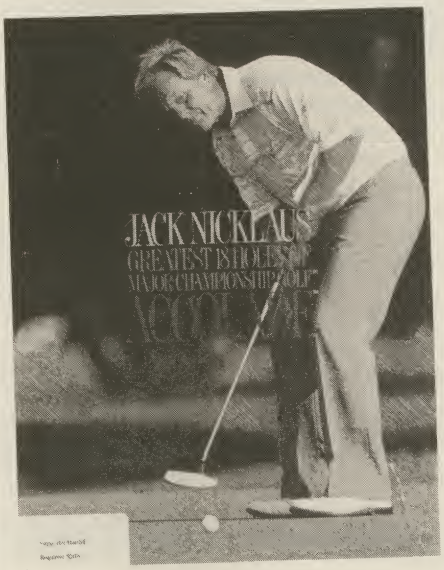
Shark Attack comes with almost post-impressionistically rendered courses – two of them. The figure of the golfer stands to the left of the screen at all times which gives no sense of movement – this lack made worse by the fact that the ball perspective leaps from big (when you hit it) to small (once it's a suitable distance away) and then disappears for a while, re-appearing like a UFO to land on one of the patchwork fairways, greens or bunkers. Hitting the ball, as in most golf sims, is a case of judging power and snap by hitting a key in time to an on-screen cue – you judge the snap from a small gauge which looks like it came straight out of a Jules Verne novel.

There is a wealth of information to hand – you can even design your own swing for example – and the options this offers should have given a rich game with plenty of action. All in all, though, it is marred by bad graphics and lack of 'feel'. Sadly not one of the classic golf sims.

JACK THE KNIFE

On the other hand, however, we have the snappily titled *Jack Nicklaus' Greatest 18 Holes of Major Championship Golf* by Accolade. Once you have got passed the packaging, which explains that the reason Jacko wins such a lot is that "he devours holes", the game itself is an excellent example of the genre. Unlike *Shark Attack,* which has a cluttered screen, *Jack Nicklaus* gives you what you need to know: wind direction, par, distance, and swing.

The swingometer is to the left of the screen and is vertical. Once you've got used to the swing and snap you will probably find yourself whizzing around the



courses with Jack to guide you.

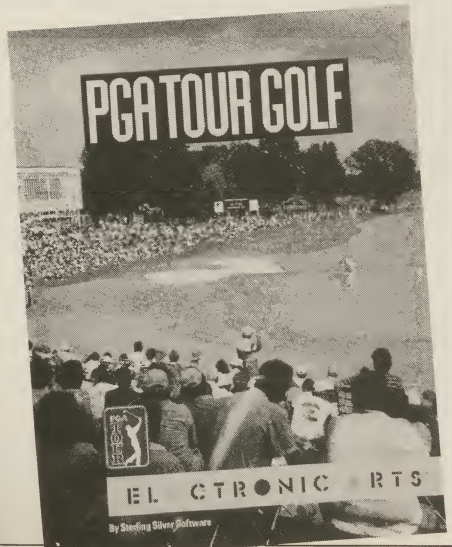
The feel of the game complements the excellent graphics and style of play – the Amiga version will also talk to you. The main failure point with *Jack Nicklaus* is the almost sadistic pleasure the programmers seem to have taken with their trees, blind holes and hazards. Get behind a shrub and it grows to an impenetrable proportions. The trick, obviously, is to avoid them and it is a credit to the game that after only a few duff holes you will soon pick up a good style. Not the finest sim but definitely up there on the leader board.

JOLLY SILLY

Moving away from the serious end of computer golf, populated by blond, blue-eyed, American golfing pros (where is *Nick Faldo's Top Ten Troon Triumphs* when we need it?) we have *Hole in One Miniature Golf* from DigiTek. This is truly wonderful if you fancy a few hours of pure fun.

Basically, it's all of the crazy golf courses which would appear in a 2001 Disney World and them some. You don't need to bother with swing or snap or wind, you don't even have to bother looking good for the caddy. Simply place your small yellow golf ball on a mat and attempt to pot it. Easy. Easy except for the fact that the holes are hidden behind alligators, force shields, skeletons, and space invader games or are on pinball tables, trans-dimensional greens – you get the idea.

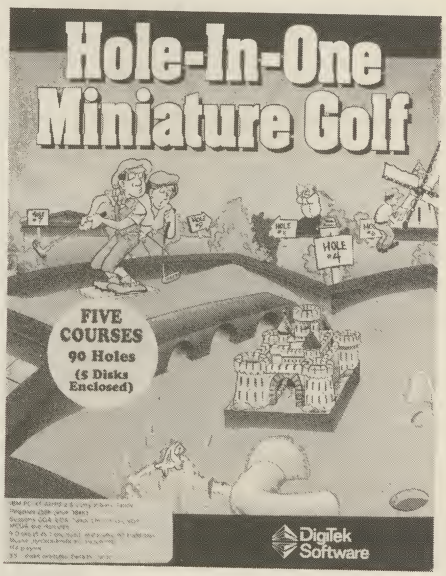
Holes-in-one are quite feasible, but then again you do have some par 2 holes. If you get too carried away and end up on stroke 6 for a par 3 hole the game stops you and forces you to move on to the next – cruel but fair. A great game, save for the name. It's got nothing to do with golf, but it's still immensely playable.



THE REAL THING

Back to the real world and we have the *Kick Off* of golf sims: *PGA Tour Golf* from Electronic Arts. All golf and no mucking about. The graphics, even running on an Amstrad 1640, are a sight to be seen – fast, slick and detailed. Although there are faults – the trees do have a tendency to disappear if you get too close and there is no out of bounds – they does not detract from the overhead views or the flying tour of each tee.

Play is a seamless affair. The swingometer is horizontal on the screen, giving power and snap with some accuracy. The greens are contour mapped as well as being normally rendered. This 'green view', with all the



contours shown in terrifying detail, has left grown *Express* hacks quivering in feats of mental calculation – does that dip to the left miss the right-sided rise? Do you under hit? The detail is amazing and the addictiveness is startling. *PGA Tour Golf* is ahead of the pack. ■

PRICES

Greg Norman's Ultimate Golf **ST £19.99, Amiga £24.99, C64 disk £19.99, PC £24.99 cassette £14.99,**

Jack Nicklaus' 18 Greatest Holes **PC £11.95, Amiga £11.99, C64 £8.95 (disk)**

Hole-in-One Miniature Golf **Phone 0101-813 933 8023**

PGA Tour Golf **PC £24.99**

THE ATARI ABC

Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.

Silica Systems are pleased to present the new Atari ABC. The ABC is a 286 AT compatible that runs at over 5 times the performance of the IBM XT. This is achieved by combining the power and speed of a 16-bit 286 processor, with Atari Corp's development experience and engineering capabilities, which use the very latest in design technology. However, the Atari ABC's are available at 'XT prices' and many XT owners will wonder why they paid more, but got less!

The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

The ABC is the latest addition to a comprehensive range of both 286 (8Mhz or 12Mhz) and 386 (16Mhz and 20Mhz) PC's, from the Business Systems Division of Atari Corp. Atari's PC range offers an unsurpassed combination of reliability, compatibility and expandability, with unique features like Atari's 44Mb removable hard disk on their PC4. Return the coupon NOW for further details of the complete range of PC products from Atari's Business Systems Division.

ABC TURBO
AVAILABLE: JUNE 90

To put the ABC even further ahead of the competition, we have introduced a special 'Turbo' version, which includes a super fast RLL hard disk controller to increase the data transfer rate from 150KBytes/s to 800KBytes/s, with a performance index of 4.801. Plus! to provide exceptional graphics with an outstanding colour resolution of up to 1024×768, we have included a Super VGA graphics adaptor and a 14" VGA colour monitor (which also supports 1024×768 resolution), all for an additional price of only £300. Check the ABC Turbo against the competition, at only £1299 (+VAT) with 30Mb hard disk, Super VGA colour graphics capabilities, plus 12 months on-site maintenance, it offers unbeatable value.

LOW PRICE - HIGH SPEC!

CPU+MOTHERBOARD	• 8Mhz 80286 16-bit CPU • Landmark Speed = 10.3Mhz, Norton SI Test = 9.0 • Latest NEAT (New Enhanced AT) technology chip set • Has user selectable bus, DMA speeds & wait states • Programmable to operate at 0 or 1 wait states • 640K RAM base memory (expandable) • Motherboard expandable to 4Mb RAM memory • Real time clock with battery back-up • Full 16-bit data line capability • Socket for 80287-8 numeric Co-Processor • 3 16-bit AT expansion slots (max)
DISK	• 32Mb RLL hard disk - 150KBytes/s transfer - 60ms access • Fast disk controller - 800KBytes/s transfer - *Turbo version* • 1.44Mb built-in 3½" floppy disk drive • Space for two 5¼" and two 3½" drives (max)
I/O	• Parallel port built-in (25-pin Centronics) • Serial port built-in (9-pin RS-232) • Mouse controller port built-in (9-pin serial)
GRAPHICS	• Super VGA video graphics controller - *512K - Turbo vers* • Super VGA: 256 colours in 800×600 res - *Turbo vers* • EGA video graphics controller built-in • EGA: 16 colours available from a palette of 64 • EGA: 256K of dedicated Video RAM built-in • MDA, CGA and Hercules graphics controller built-in
PHYSICAL	• Low noise operation • Ergonomic small footprint (38cm×41cm×15cm) • Keyboard - 102 key enhanced AT (12 function keys) • Keyboard - has 2 position height adjusters
PLUS!	• Fully OS/2 compatible (requires 4Mb RAM) • Supports Industry Standard Networks • MS-DOS 3.3 with GW BASIC 3.22 • 12 Months FREE on-site maintenance included

286 AT

WITH 30Mb HARD DISK & EGA MONITOR - £899

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ABC TURBO £1299 EXC VAT
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- 30Mb HARD DISK DRIVE
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ATARI

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TECHNICAL SUPPORT HELPLINE: Team of Atari technical experts at your service.
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PAYMENT: Cash / cheque / credit card / credit - we are licensed credit brokers - details on request.

Before you decide when to buy your new Atari ABC, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your ABC, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new ABC products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

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Which computer(s), if any, do you own? .....

E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

COMPUTER CHAOS

This week's selection of electronic disasters, selected from the overflowing records of cock-up collector Mel Croucher

LONDON,UK

David Redding of Oftel offers British Telecom subscribers a public apology after the biggest BT mail-shot cock-up ever. 200,000 hapless customers receive the communication which includes sensible advice on credit card security: "All holders should be advised that the (card) numbers should not be disclosed to other persons." The trouble is the mail-shot also includes a free-post card, available for anyone to read. It features the customer's name, address and credit card number.
(Oftel)

NEW YORK, USA

C and M I D is a fast-growing advertising agency, and has acquired a computerised schedule for where best to place clients' propaganda, and when. Unfortunately, the computer cannot distinguish between sunny Miami, Florida, and the snowy Miami River Valley, Ohio. The agency is fired pronto when a major swimwear manufacturer discovers that its wares are being advertised in mid-January at latitude forty-degrees North.
(*Herald Tribune*)

CALIFORNIA, USA

There is a slight design problem with all Televideo-910 computer terminal packages. If you hit the CTRL-S key immediately after typing LOGOFF, the terminal dies. Forever.
(*Software Engineering Notes*)

GLASTONBURY, UK

The police commission a two million pound computerised nose to sniff out illegal drugs at the annual Glastonbury Festival. It is based on the latest technology, developed for detecting drugs and explosives at international airports. Over 500 arrests are made for drug-related offences during the festival weekend, but not one as a result of high-tech. A police spokesman confirms that the forces of law and order are confining the machine to the cells as it seems to be suffering from freak-out fatigue. So how are the drug abusers detected? Sniffer dogs, of course.
(SCANN Gate Officer, Glastonbury)

NEW YORK, USA

Robert Bersaggi is a 31-year-old telecoms technician who appears to harbour something of a grudge against his former employer, Eastman Kodak. He is convicted of breaking into a Kodak computer via his home machine, and shutting down a total of 11,688 telephone lines in an effort to grind the multinational's communications to a halt.
(Reuter)

LONDON, UK

All 58,000 members of the Institution of Electrical Engineers receive their annual subscription notices eight weeks late. The IOEE Secretary says that this is because even though the computer printed all the addresses correctly, it though that every member was named "?".
(*The 2000 Report*)

CLARK AIR BASE, PHILIPPINES

Don Orlando is a pilot flying DC-8s newly equipped with four CMF-56 engines. Concerned after the British Midland tragedy, when a Boeing-737 with CMF-56s fell out of the sky, he is assured by aviation computer experts that the likelihood of two engines failing on the same flight is a near impossibility, and that the prospect of three engines going on the fritz is even more so. Orlando is captaining his military passenger aircraft on a flight between Okinawa and the Philippines when three engines fail simultaneously. He manages to land the plane, just before the fourth engine fails during parking.
(Don Orlando, Transamerica Airlines)

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★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★

ATARI Portfolio

THE PC IN YOUR POCKET

The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80×25 character display.

Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.

Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.

And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.

FOR ONLY £249 INC VAT

SPECIFICATION

- ★ ***Processor:*** Intel 80C88 at 4.9152Mhz.
- ★ ***Operating System:*** Compatible with MS-DOS 2.11.
- ★ ***Internal ROM:*** 256K containing BIOS, operating system and applications suite.
- ★ ***RAM:*** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- ★ ***Keyboard:*** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- ★ ***Character Set:*** Extended IBM ASCII (255 characters).
- ★ ***Mass storage:*** credit card sized memory cards (32K or 64K or 128K RAM).
- ★ ***Display:*** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- ★ ***Peripherals:*** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- ★ ***Size:*** 8" x 4" x 1" (200mm x 105mm x 29mm).
- ★ ***Weight:*** 495 grammes (with batteries).
- ★ ***Applications:*** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications software.

COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serial/centronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.

5 BUILT-IN APPLICATIONS TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial, power and root calculations, all with multi display formats and memories.

ADDRESS BOOK & DIALLER

Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, or search for a specific grouping, such as "all Italian restaurants". And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

TEXT PROCESSOR

The Portfolio's built-in text processor program includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data to and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.

MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards, that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.

POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.

INTERFACES & PERIPHERALS

Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

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- ***FREE OVERNIGHT COURIER DELIVERY:*** On all hardware orders shipped in the UK.
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- ***CREDIT PAYMENT TERMS:*** Silica are licensed credit brokers - details on request.

Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

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LocoScript

NOW FOR THE PC†

LocoScript PC is the new version of the million-selling word processor. Originally released on the Amstrad PCW, the PC version is faster and much more powerful!

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†*LocoScript PC* runs on any IBM PC compatible with at least 512K RAM, DOS v2.1 or later and one floppy disc drive. All standard display adapters are supported and both 5½" and 3¼" discs are supplied in the package.
††Special characters require a graphics adapter and a suitable 24 pin printer.

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